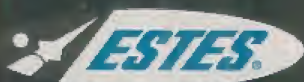


PRODUCT



CATALOG



1998

ESTES • COX • LIGHT GLIDERS  
WEST WINGS • STAR WARS



## LIVE YOUR DREAMS OF FLIGHT

Have you ever dreamed of flying your own airplane or blasting off into space in a rocket? Now you can make your dreams come true with exciting flying models from Estes and Cox. Feel the rush of launching a high performance rocket or a military style missile thousands of feet into the sky! Experience the thrill of taking off and landing your own business jet or attack helicopter. Realize the power of a catapult launched F-15 glider or the fury of a rubber band powered airplane slicing through the air. Live your dreams of flight with real flying models from Estes and Cox.

## ENCOUNTER THE EPIC ADVENTURE OF STAR WARS

Combine the enchantment of *Star Wars* with the technology of aerodynamics and you'll find a true-life adventure with Estes and Cox *Star Wars* flying models. Blast-off into the universe in your X-wing™ starfighter rocket or skim low over the ground in a Rebel snowspeeder control line fighter. Whether you're a part of the Alliance or the Empire, you'll find the perfect flying model spacecraft to transport you to a galaxy far, far away! Estes and Cox flying models are sure to provide you with a real *Star Wars* adventure!



## TABLE OF CONTENTS

This catalog is divided into sections according to type of product.

### ESTES MODEL ROCKETRY PRODUCTS

Introduction	2
Estes Warranty	4
Model Rocket Safety Code	5
Starter Kits	6
Ready to Fly	11
Almost Ready To Fly (P2X® Series)	17
Level 1 (Beta™ Series)	20
Level 2 (Explor™ Series)	24
Level 3 (Challenger™ Series)	26
Level 4 (Master™ Series)	30
Estes R/C	41
Estes Engines	42
Accessories/Parts	44
Launch Accessories	45
Educational Products	48
Software	49

### COX MODEL PRODUCTS

Fun Flyers™	50
Introduction	51
Electric Control Line	51
E-Z Flyers®	52
Control Line Scale	54
Control Line Sure Start®	54
Free Flight Helicopters	56
Radio Control	58
Cox Engines	63
Accessories	63
Cox Warranty	63

### LIGHT GLIDERS

### WEST WINGS MODELS

### STAR WARS

Estes®	68
Commemorative <i>Star Wars</i>	72
West Wings	72
Cox®	74
Sterling™ Models	74
North Coast Rocketry®	75

### OTHER PRODUCTS

### INDEX



## ESTES FLYING MODEL ROCKETS

### The History of Estes Industries

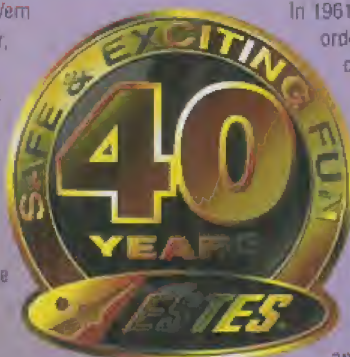
Estes Industries was founded by Vern Estes and his wife Gleda in Denver, Colorado. Starting in 1958 with the manufacturing of solid propellant model rocket engines on a machine of his own design, Vern Estes (pronounced "Ess-less") later branched out into mass production of balsa nose cones and adapters for model rockets. He and his wife began selling model rockets by mail in 1960.

### United States Space Foundation

Estes has partnered with the United States Space Foundation to promote space and science to K-12 educators and the public. Estes rockets are the Official Rockets of the United States Space Foundation and are used in Space Discovery, the USSF graduate course for K-12 educators. Estes worked closely with USSF to co-develop the "Ignite the Imagination"™ video and curriculum guide for teachers and youth group leaders. For more information about USSF call 1-800-691-4000.

### U.S. Space & Rocket Center

Estes has developed a close partnership with the U.S. Space & Rocket Center. Estes rockets are the Official Rockets of U.S. SPACE CAMPS. Estes model rockets are used exclusively in their SPACE CAMP® education programs. For more information about SPACE CAMP®, call 1-800-63-SPACE.



In 1961, due to a steady increase in orders, Vern Estes moved the company to a 77-acre tract on the outskirts of Penrose, about 30 miles southwest of Colorado Springs. Rapid growth followed, and soon Penrose became known as the "Model Rocket Capital of the World". Estes Industries became, and remains to this day, the world leader in model rocketry, celebrating its 40th anniversary.



Official Rockets of U.S. SPACE CAMP®



## THE WORLD LEADER IN MODEL ROCKETRY

Look to Estes when you're ready to build a stellar looking display model AND feel the exhilaration of launching a real rocket! Estes flying model rockets are micro-versions of authentic rockets flown all over the world. From scale NASA-based transports to military styled missiles, from futuristic alien spacecraft to high performance sport fliers, Estes rocketry is the only way to go! Experience the roar of an Estes rocket lifting off the launch pad, screaming into the sky and then safely floating back to earth on a colorful, plastic parachute. Replace the engine and igniter and you are ready to launch again in minutes! You can build all types of Estes rockets and send them skyward with your reusable launch system. All you typically need for additional flights would be extra engines, igniters and recovery wadding.

### IS IT SAFE?

Estes model rocketry is one of the safest outdoor activities in the world. Over 300 million model rockets have been launched safely since 1957. It is safer than most sporting activities. Estes has provided 40 years of safe, innovative and breathtaking fun to people of all ages. Whether you're into flying rockets for sport or competition, Estes rockets offer you a truly rewarding experience. And remember, it's up to each and everyone involved to keep model rocketry a safe activity well into the next millennium. You can do your part by following the Model Rocketry Safety Code at ALL times (see page 5 for Safety Code).

### HOW DO I START MY OWN ESTES ROCKET FLEET?

The best way to embark in model rocketry is with an Estes flying model rocket starter set. You can either begin with a Ready To Fly Starter Set that has a fully constructed model rocket or an E2X™ Starter Set that requires assembly prior to launching. Both of these sets come complete with an electrical launch controller, adjustable launch pad, engines, flight supplies and an information booklet to get you up and flying in no time. You'll need four AA alkaline batteries and possibly some glue, depending on which set you select.



### HOW EASY AND HOW MUCH TIME DOES IT TAKE TO BUILD MY ROCKETS?

Estes kits range from ready to launch in several minutes to those that provide many enjoyable hours of building fun. Our kits are classified into six categories:

**READY TO FLY:** No paint, no glue and no tools, just the pure enjoyment of flight. Assemble the launch pad, prepare the engine, attach and pack the parachute and get ready for a thrill. These models are a perfect introduction for the beginning rocketeer.

**ALMOST READY TO FLY (E2X® SERIES):** No painting or special tools required. These rocket kits require minor assembly and can be constructed in one or two hours. E2X kits are complete with out-of-this-world colorful self-adhesive decals and pre-colored parts.

**LEVEL 1 (BETA™ SERIES):** Quick and easy to build kits with some sanding, cutting and painting required. Easily built on a lazy Saturday afternoon! Most kits feature our T™ Fin System (Through-The-Tube) - giving you strong and precisely mounted fins.

**LEVEL 2 (EXPLORER™ SERIES):** This is the first tier of craftsman kits. These kits require more time in building and painting. In this series, you will find rockets that use Estes' largest engine - the powerful "D".

**LEVEL 3 (CHALLENGE™ SERIES):** The second category of craftsmanship includes kits that combine challenging construction techniques with a high level of flying enjoyment.

**LEVEL 4 (MASTERS™ SERIES):** These kits require a high degree of modeling involvement from building to painting. The result is a rocket with museum-like qualities that really flies!



## HOW DO ESTES MODEL ROCKETS WORK?

Estes model rockets are activity kits designed out of lightweight materials such as paper tubing, balsa wood and plastic. Balsa or plastic fins are glued to the airframe for guidance and stability. A model rocket engine holder is also part of the airframe to keep the engine in place during thrust.

Estes was the first to develop a safe, mass produced model rocket engine and has produced the engines for 40 years.

The Estes model rocket is propelled into the air by an electrically ignited model rocket engine. After its acceleration, the rocket continues upward emitting tracking smoke as it coasts. At the rocket's peak altitude (also called apogee), a recovery device, such as a plastic parachute or streamer, is deployed to return the rocket safely to earth. The rocket can then be prepped for another flight.

## WHERE DO I FLY ESTES MODEL ROCKETS?

The chart on the next page tells you what size field to use for what size engine. Each engine size is designated by a letter and is up to twice as powerful as the letter before it. See the engine section (pages 42-44) of this catalog for more information.

## WHAT DO I NEED TO KNOW?

In this catalog, each description lists important INFORMATION:

- Something fun about the rocket
- Specifications - how tall, wide and heavy
- What engines we recommend, especially for that all important very first flight!
- How high, on the largest engine recommended, the rocket flies (in feet and in meters)
- The sort of recovery system that brings the rocket back - parachute, streamer or other
- The type of fin material - plastic, balsa or fiber

Pick out your favorite rockets...and watch for the Rocket Tips for valuable info on model rocketry. Remember - Estes model rocket kits offer you a wide spectrum of building and flying. Best of all, they are all **FUN** to assemble, build and fly!

## PLEASE READ: IMPORTANT STUFF!

Estes model rocketry is recommended for ages 10 years and up. Adult supervision is recommended for those under 12 years of age.

Unless otherwise specified all models require assembly. Engines, launch system, glue and finishing supplies are not included with the kits unless specified otherwise.

Prices subject to change without notice.

### USE ONLY WITH ESTES PRODUCTS

Caution: Use of this Estes product with any other brand-name rocket product containing any defect or causing any damage may void the Estes warranty. Maximum altitudes are projections only, your rocket's actual performance may vary.

© Copyright 1997 Centuri Corporation. All rights reserved.

TM & © 1997 Lucasfilm Ltd. All rights reserved. Used under authorization.

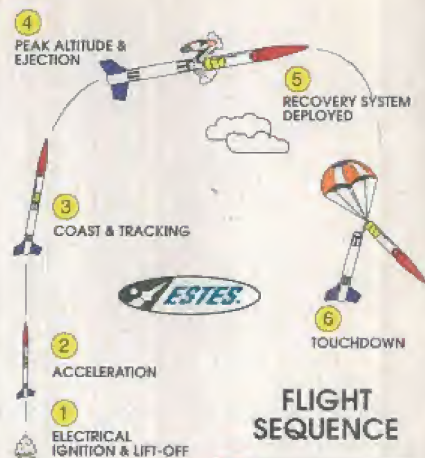
## FULL ONE YEAR WARRANTY

Your Estes product is warranted against defects in materials or workmanship for one year from the date of the original purchase. Any Estes product, except computer software, which, because of a manufacturing mistake, malfunctions or proves to be defective within the one-year warranty period will be repaired or replaced, at Estes' option and at no charge to you, provided it is returned to Estes with proof of purchase.

This warranty does not cover incidental or consequential damage to persons or property caused by the use, abuse, misuse, failure to comply with operating instructions or improper storage of the warranted product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

For repair or replacement under this warranty, please return the defective part of your Estes product with proof of purchase to: Estes Industries, Customer Service Department, 1295 H Street, P.O. Box 227, Penrose, CO 81240-0227.



**ROCKET TIP**  
In most cases, baseball, soccer or football fields are great launch areas!



Boys and girls enjoy building and launching Estes model rockets.

## MODEL ROCKET SAFETY CODE (EFFECTIVE 10-91)

**1. Materials**—My model rocket will be made of lightweight materials such as paper, wood, rubber, and plastic suitable for the power used and the performance of my model rocket. I will not use any metal for the nose cone, body, or fins of a model rocket.

**2. Motors/Engines**—I will use only commercially-made NAR certified model rocket engines in the manner recommended by the manufacturer. I will not alter the model rocket engine, its parts, or its ingredients in any way.

**3. Recovery**—I will always use a recovery system in my model rocket that will return it safely to the ground so it may be flown again. I will use only flame-resistant recovery wadding if required.

**4. Weight and Power Limits**—My model rocket will weigh no more than 1500 grams (53 oz.) at lift-off, and its rocket engines will produce no more than 320 Newton-seconds (4.45 Newtons equal 1.0 pound) of total impulse. My model rocket will weigh no more than the engine manufacturer's recommended maximum lift-off weight for the engines used, or I will use engines recommended by the manufacturer for my model rocket.

**5. Stability**—I will check the stability of my model rocket before its first flight, except when launching a model rocket of already proven stability.

**6. Payloads**—Except for insects, my model rocket will never carry live animals or a payload that is intended to be flammable, explosive, or harmful.

**7. Launch Site**—I will launch my model rocket outdoors in a cleared area, free of tall trees, power lines, buildings, and dry brush and grass. My launch site will be at least as large as that recommended in the following table.

### LAUNCH SITE DIMENSIONS

Installed Total Impulse (Newtons-seconds)	Equivalent Engine Type	Minimum Site Dimension (feet) (meters)
0.00- 1.25	1/4A & 1/2A	50 15
1.26- 2.50	A	100 30
2.51- 5.00	B	200 60
5.01- 10.00	C	400 120
10.01- 20.00	D	500 150
20.01- 40.00	E	1000 300
40.01- 80.00	F	1000 300
80.01-160.00	G	1000 300
160.01-320.00	2Gs	1500 450

**8. Launcher**—I will launch my model rocket from a stable launching device that provides rigid guidance until the model rocket has reached a speed adequate to ensure a safe flight path. To prevent accidental eye injury, I will always place the launcher so that the end of the rod is above eye level or I will cap the end of the launch rod when approaching it. I will cap or disassemble my launch rod when not in use and I will never store it in an upright position. My launcher will have a jet deflector device to prevent the engine exhaust from hitting the ground directly. I will always clear the area around my launch device of brown grass, dry weeds, and other easy-to-burn materials.

**9. Ignition System**—The system I use to launch my model rocket will be remotely controlled and electrically operated. It will contain a launching switch that will return to "off" when released. The system will contain a removable safety interlock in series with the launch switch. All persons will remain at least 15 feet (5 meters) from the model rocket when I am igniting model rocket engines totalling 30 Newton-seconds or less of total impulse and at least 30 feet (9 meters) from the model rocket when I am igniting model rocket engines totalling more than 30 Newton-seconds of total impulse. I will use only electrical igniters recommended by the engine manufacturer that will ignite model rocket engine(s) within one second of actuation of the launching switch.

**10. Launch Safety**—I will ensure that people in the launch area are aware of the pending model rocket launch and can see the model rocket's liftoff before I begin my audible five-second countdown. I will not launch a model rocket using it as a weapon. If my model rocket suffers a misfire, I will not allow anyone to approach it or the launcher until I have made certain that the safety interlock has been removed or that the battery has been disconnected from the ignition system. I will wait one minute after a misfire before allowing anyone to approach the launcher.

**11. Flying Conditions**—I will launch my model rocket only when the wind is less than 20 miles (30 kilometers) an hour. I will not launch my model rocket so it flies into clouds, near aircraft in flight, or in a manner that is hazardous to people or property.

**12. Pre-Launch Test**—When conducting research activities with unproven model rocket designs or methods I will, when possible, determine the reliability of my model rocket by pre-launch tests. I will conduct the launching of an unproven design in complete isolation from persons not participating in the actual launching.

**13. Launch Angle**—My launch device will be pointed within 30 degrees of vertical. I will never use model rocket engines to propel any device horizontally.

**14. Recovery Hazards**—If a model rocket becomes entangled in a power line or other dangerous place, I will not attempt to retrieve it.

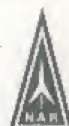
As a member of the Estes Model Rocketry Program, I promise to faithfully follow all rules of safe conduct as established in the above code.

Signature \_\_\_\_\_

\*This is the official Model Rocketry Safety Code of the National Association of Rocketry and the Model Rocket Manufacturers Association.

**Important Note: "G" engines must be sold to and used by adults (18 and up) only.**

To launch large model rockets weighing more than one lb. (453 g) but no more than 3.3 lbs. (1500 g) including propellant or rockets containing more than 4 oz. (113 g) but no more than 4.4 oz. (125 g) of propellant (net weight), you must notify and perhaps obtain authorization from the Federal Aviation Administration (FAA). Check your telephone directory for the FAA office nearest you or contact Estes Industries for further information.





## HOW DO ESTES MODEL ROCKETS WORK?

Estes model rockets are activity kits designed out of lightweight materials such as paper tubing, balsa wood and plastic. Balsa or plastic fins are glued to the airframe for guidance and stability. A model rocket engine holder is also part of the airframe to keep the engine in place during thrust.

Estes was the first to develop a safe, mass produced model rocket engine and has produced the engines for 40 years.

The Estes model rocket is propelled into the air by an electrically ignited model rocket engine. After its acceleration, the rocket continues upward emitting tracking smoke as it coasts. At the rocket's peak altitude (also called apogee), a recovery device, such as a plastic parachute or streamer, is deployed to return the rocket safely to earth. The rocket can then be prepped for another flight.

## WHERE DO I FLY ESTES MODEL ROCKETS?

The chart on the next page tells you what size field to use for what size engine. Each engine size is designated by a letter and is up to twice as powerful as the letter before it. See the engine section (pages 42-44) of this catalog for more information.

## WHAT DO I NEED TO KNOW?

In this catalog, each description lists important INFORMATION:

- Something fun about the rocket
- Specifications - how tall, wide and heavy
- What engines we recommend, especially for that all important very first flight!
- How high, on the largest engine recommended, the rocket flies (in feet and in meters)
- The sort of recovery system that brings the rocket back - parachute, streamer or other
- The type of fin material - plastic, balsa or fiber

Pick out your favorite rockets...and watch for the Rocket Tips for valuable info on model rocketry. Remember - Estes model rocket kits offer you a wide spectrum of building and flying. Best of all, they are all **FUN** to assemble, build and fly!

## PLEASE READ: IMPORTANT STUFF!

Estes model rocketry is recommended for ages 10 years and up. Adult supervision is recommended for those under 12 years of age.

Unless otherwise specified all models require assembly. Engines, launch system, glue and finishing supplies are not included with the kits unless specified otherwise.

Prices subject to change without notice.

### USE ONLY WITH ESTES PRODUCTS

Caution: Use of this Estes product with any other brand-name rocket product containing any defect or causing any damage may void the Estes warranty. Maximum altitudes are projections only, your rocket's actual performance may vary.

© Copyright 1997 Centuri Corporation. All rights reserved.

TM & © 1997 Lucasfilm Ltd. All rights reserved. Used under authorization.

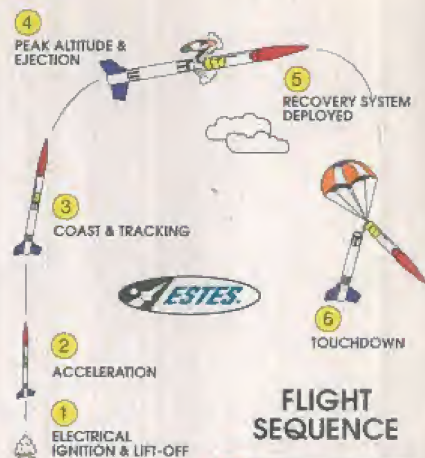
## FULL ONE YEAR WARRANTY

Your Estes product is warranted against defects in materials or workmanship for one year from the date of the original purchase. Any Estes product, except computer software, which, because of a manufacturing mistake, malfunctions or proves to be defective within the one-year warranty period will be repaired or replaced, at Estes' option and at no charge to you, provided it is returned to Estes with proof of purchase.

This warranty does not cover incidental or consequential damage to persons or property caused by the use, abuse, misuse, failure to comply with operating instructions or improper storage of the warranted product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

For repair or replacement under this warranty, please return the defective part of your Estes product with proof of purchase to: Estes Industries, Customer Service Department, 1295 H Street, P.O. Box 227, Penrose, CO 81240-0227.



## FLIGHT SEQUENCE

**ROCKET TIP**  
In most cases, baseball, soccer or football fields are great launch areas!



Boys and girls enjoy building and launching Estes model rockets.

## MODEL ROCKET SAFETY CODE (EFFECTIVE 10-91)

**1. Materials**—My model rocket will be made of lightweight materials such as paper, wood, rubber, and plastic suitable for the power used and the performance of my model rocket. I will not use any metal for the nose cone, body, or fins of a model rocket.

**2. Motors/Engines**—I will use only commercially-made NAR certified model rocket engines in the manner recommended by the manufacturer. I will not alter the model rocket engine, its parts, or its ingredients in any way.

**3. Recovery**—I will always use a recovery system in my model rocket that will return it safely to the ground so it may be flown again. I will use only flame-resistant recovery wadding if required.

**4. Weight and Power Limits**—My model rocket will weigh no more than 1500 grams (53 oz.) at lift-off, and its rocket engines will produce no more than 320 Newton-seconds (4.45 Newtons equal 1.0 pound) of total impulse. My model rocket will weigh no more than the engine manufacturer's recommended maximum lift-off weight for the engines used, or I will use engines recommended by the manufacturer for my model rocket.

**5. Stability**—I will check the stability of my model rocket before its first flight, except when launching a model rocket of already proven stability.

**6. Payloads**—Except for insects, my model rocket will never carry live animals or a payload that is intended to be flammable, explosive, or harmful.

**7. Launch Site**—I will launch my model rocket outdoors in a cleared area, free of tall trees, power lines, buildings, and dry brush and grass. My launch site will be at least as large as that recommended in the following table.

### LAUNCH SITE DIMENSIONS

Installed Total Impulse (Newtons-seconds)	Equivalent Engine Type	Minimum Site Dimension (feet) (meters)
0.00- 1.25	1/4A & 1/2A	50 15
1.26- 2.50	A	100 30
2.51- 5.00	B	200 60
5.01- 10.00	C	400 120
10.01- 20.00	D	500 150
20.01- 40.00	E	1000 300
40.01- 80.00	F	1000 300
80.01-160.00	G	1000 300
160.01-320.00	2Gs	1500 450

**8. Launcher**—I will launch my model rocket from a stable launching device that provides rigid guidance until the model rocket has reached a speed adequate to ensure a safe flight path. To prevent accidental eye injury, I will always place the launcher so that the end of the rod is above eye level or I will cap the end of the launch rod when approaching it. I will cap or disassemble my launch rod when not in use and I will never store it in an upright position. My launcher will have a jet deflector device to prevent the engine exhaust from hitting the ground directly. I will always clear the area around my launch device of brown grass, dry weeds, and other easy-to-burn materials.

**9. Ignition System**—The system I use to launch my model rocket will be remotely controlled and electrically operated. It will contain a launching switch that will return to "off" when released. The system will contain a removable safety interlock in series with the launch switch. All persons will remain at least 15 feet (5 meters) from the model rocket when I am igniting model rocket engines totalling 30 Newton-seconds or less of total impulse and at least 30 feet (9 meters) from the model rocket when I am igniting model rocket engines totalling more than 30 Newton-seconds of total impulse. I will use only electrical igniters recommended by the engine manufacturer that will ignite model rocket engine(s) within one second of actuation of the launching switch.

**10. Launch Safety**—I will ensure that people in the launch area are aware of the pending model rocket launch and can see the model rocket's liftoff before I begin my audible five-second countdown. I will not launch a model rocket using it as a weapon. If my model rocket suffers a misfire, I will not allow anyone to approach it or the launcher until I have made certain that the safety interlock has been removed or that the battery has been disconnected from the ignition system. I will wait one minute after a misfire before allowing anyone to approach the launcher.

**11. Flying Conditions**—I will launch my model rocket only when the wind is less than 20 miles (30 kilometers) an hour. I will not launch my model rocket so it flies into clouds, near aircraft in flight, or in a manner that is hazardous to people or property.

**12. Pre-Launch Test**—When conducting research activities with unproven model rocket designs or methods I will, when possible, determine the reliability of my model rocket by pre-launch tests. I will conduct the launching of an unproven design in complete isolation from persons not participating in the actual launching.

**13. Launch Angle**—My launch device will be pointed within 30 degrees of vertical. I will never use model rocket engines to propel any device horizontally.

**14. Recovery Hazards**—If a model rocket becomes entangled in a power line or other dangerous place, I will not attempt to retrieve it.

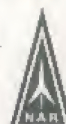
As a member of the Estes Model Rocketry Program, I promise to faithfully follow all rules of safe conduct as established in the above code.

Signature \_\_\_\_\_

\*This is the official Model Rocketry Safety Code of the National Association of Rocketry and the Model Rocket Manufacturers Association.

**Important Note: "G" engines must be sold to and used by adults (18 and up) only.**

To launch large model rockets weighing more than one lb. (453 g) but no more than 3.3 lbs. (1500 g) including propellant or rockets containing more than 4 oz. (113 g) but no more than 4.4 oz. (125 g) of propellant (net weight), you must notify and perhaps obtain authorization from the Federal Aviation Administration (FAA). Check your telephone directory for the FAA office nearest you or contact Estes Industries for further information.







# StarterSets



- Ready to Fly (RTF) Starter Sets
- Fully constructed and decorated rocket
  - Assembled parachute
  - Ready to launch in minutes
  - Complete launch system with flight supplies

## ESTES STARTER SETS

Experience the thrill of flying an Estes rocket with a high flying model rocket starter set. Each starter set comes complete with a high flying rocket and dependable launch system. Just add four AA alkaline batteries and you're ready to fly! (Some sets may require glue.) Each starter set contains:

- A high flying rocket
- The highly reliable Electron Beam® launch controller
- The versatile Porta-Pad® II launch pad
- Engines and flight supplies for your first launch missions
- Model rocketeer's guide booklet
- Model rocketry safety code and full one year warranty

## ESTES RTF STARTER SETS

### TIDAL WAVE™ EST 1811

The Tidal Wave™ Starter Set will sweep over you with its deep, dark blue air frame, white fin and nose cone. Visually stimulating on the ground and in the air, the Tidal Wave™ will make waves at your next launch. Powerful liftoffs are followed by soft parachute landings for maximum fun!

**SPECS:** Length: 18" (45.7 cm), Dia.: 1.35" (34.3 mm), Wt.: 2.7 oz (75 g), Recovery: 12" (30 cm) assembled parachute, Fins: Plastic molded, Max. Altitude: 600 ft (183 m), Recommended Engines: A8-3 (first flight), B4-4, B6-4, C6-5 (includes three engines)

### IONIZER™ EST 1812

The Ionizer™ Starter Set is hot! With its metallic green body, yellow fin, and nose cone, the Ionizer™ looks like it's flying at hyperspeed! This is the perfect rocket to start you flying in minutes!

**SPECS:** Length: 18" (45.7 cm), Dia.: 1.35" (34.3 mm), Wt.: 2.7 oz (75 g), Recovery: 12" (30 cm) assembled parachute, Fins: Plastic molded, Max. Altitude: 600 ft (183 m), Recommended Engines: A8-3 (first flight), B4-4, B6-4, C6-5 (includes three engines)

### CODE RED™ EST 1824

A great new rocket from Estes! With its high tech look, the Code Red™ will put everyone on alert! The prismatic red air frame is highly visible in flight! The ideal way to get into the air fast!

**SPECS:** Length: 18" (45.7 cm), Dia.: 1.35" (34.3 mm), Wt.: 2.7 oz (75 g), Recovery: 12" (30 cm) assembled parachute, Fins: Plastic molded, Max. Altitude: 600 ft (183 m), Recommended Engines: A8-3 (first flight), B4-4, B6-4, C6-5 (includes three engines)

### QUICKSILVER™ EST 1800

The Quicksilver™ is a lightning fast way to get flying! This Ready-Built rocket flies straight and true to incredible altitudes before deploying its colorful parachute for a soft, safe recovery. Fly again and again! Available in silver, gold, green or blue.

**SPECS:** Length: 16.5" (42.2 cm), Dia.: 1.35" (34.3 mm), Wt.: 2.3 oz (64 g), Recovery: 12" (30 cm) assembled parachute, Fins: Plastic molded, Max. Altitude: 1000 ft (305 m), Recommended Engines: A8-3 (first flight), B4-4, B6-4, C6-5 (includes three engines)

### STARDUST™ EST 1817

Do you want to go to the stars? The Stardust™ Starter Set will take you there! Not only does the rocket feature a prismatic finish, it deploys "glitter stars" at the high point of flight. Engines, glitter and engines are included to get you off the ground!

**SPECS:** Length: 16.5" (42.2 cm), Dia.: 1.0" (25.4 mm), Wt.: 1.8 oz (49 g), Recovery: 12" (30 cm) assembled parachute, Fins: Plastic molded, Max. Altitude: 1000 ft (305 m), Recommended Engines: A8-3 (first flight), B4-4, B6-4, B6-5, C6-5 (includes three engines)

NEW!



TIDAL WAVE™ RTF STARTER SET



NEW!



IONIZER™ RTF STARTER SET



NEW!



CODE RED™ RTF STARTER SET



NEW!



QUICKSILVER™ RTF STARTER SET

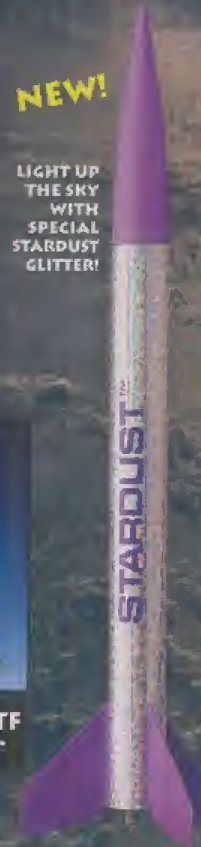


NEW!

LIGHT UP THE SKY WITH SPECIAL STARDUST GLITTER!



STARDUST™ RTF STARTER SET



Recommended for ages 10 years and up. Adult supervision for those under 12. Four AA alkaline batteries required - not included.





# Starter Sets



NEW!

EXPLORE  
AERIAL  
PHOTOGRAPHY

NEW!

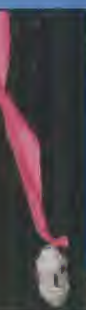
SHELLSHOCKED™



ASTROCAM® RTE

NEW!

NEW!



RECON™

NEW!



FREE FALL™

MISSILE  
COMMAND™  
← ARMY  
NAVY ↓

NEW!

## ASTROCAM® RTE EST 1814

The Astrocam RTE shows you nature's most beautiful sights from the sky. You'll be taking aerial photos of your garden, your back yard, your pet, or your favorite places. The Astrocam RTE is a great way to get the best of both worlds. The Astrocam RTE is a great way to get the best of both worlds.

**SPECS:** Length: 18" (45.7 cm); Dia.: 1.35" (34.3 mm);  
WL: 2.7 oz (77 g); Recovery: 24" (61 cm) assembled  
parachute; Flns: Plastic mold; Max. Altitude: 500 ft (152 m)  
Recommended Engine: C6-5 (includes three engines)

## RECON™ EST 1814

The Recon™ shows you the world's most beautiful sights from the sky. You'll be taking aerial photos of your garden, your back yard, your pet, or your favorite places. The Recon™ is a great way to get the best of both worlds. The Recon™ is a great way to get the best of both worlds.

**SPECS:** Length: 18" (45.7 cm); Dia.: 1.35" (34.3 mm);  
WL: 2.7 oz (77 g); Recovery: 24" (61 cm) assembled  
parachute; Flns: Plastic mold; Max. Altitude: 500 ft (152 m)  
Recommended Engine: C6-5 (includes three engines)

## SHELLSHOCKED™ EST 1815

The Shellshocked™ shows you the world's most beautiful sights from the sky. You'll be taking aerial photos of your garden, your back yard, your pet, or your favorite places. The Shellshocked™ is a great way to get the best of both worlds. The Shellshocked™ is a great way to get the best of both worlds.

**SPECS:** Length: 18" (45.7 cm); Dia.: 1.35" (34.3 mm);  
WL: 2.5 oz (71 g); Recovery: 24" (61 cm) assembled  
parachute; Flns: Plastic mold; Max. Altitude: 500 ft (152 m)  
Recommended Engine: C6-5 (includes three engines)

## FREE FALL™ EST 1818

The Free Fall™ shows you the world's most beautiful sights from the sky. You'll be taking aerial photos of your garden, your back yard, your pet, or your favorite places. The Free Fall™ is a great way to get the best of both worlds. The Free Fall™ is a great way to get the best of both worlds.

**SPECS:** Length: 18" (45.7 cm); Dia.: 1.35" (34.3 mm);  
WL: 2.5 oz (71 g); Recovery: 24" (61 cm) assembled  
parachute; Flns: Plastic mold; Max. Altitude: 500 ft (152 m)  
Recommended Engine: C6-5 (includes three engines)

## MISSILE COMMAND™ EST 1818

The Missile Command™ shows you the world's most beautiful sights from the sky. You'll be taking aerial photos of your garden, your back yard, your pet, or your favorite places. The Missile Command™ is a great way to get the best of both worlds. The Missile Command™ is a great way to get the best of both worlds.

**SPECS:** Length: 18" (45.7 cm); Dia.: 1.35" (34.3 mm);  
WL: 2.5 oz (71 g); Recovery: 24" (61 cm) assembled  
parachute; Flns: Plastic mold; Max. Altitude: 500 ft (152 m)  
Recommended Engine: C6-5 (includes three engines)

Recommended for ages 10 years and up. Adult  
supervision for those under 12.  
Four AA alkaline batteries required - not included.







## StarterSets



# E2X<sup>®</sup> SERIES

- E2X<sup>®</sup> Starter Sets
- Almost ready to fly rocket
- Assembled parachute
- Self-adhesive decals
- Complete launch system with engines
- Colored parts



**MEGA MAXX<sup>™</sup>**  
STARTER SET  
← **GOLIATH<sup>™</sup>**  
**SPITFIRE<sup>™</sup>** ↓

**NEW!**



**SABRE<sup>™</sup>**  
STARTER SET



**ALPHA III<sup>®</sup> STARTER SET**



**FLIGHTS TO  
1000 FEET  
(305 M)!**

Recommended for ages 10 years and  
up. Adult supervision for those under 12.  
Assembly, glue and four AA alkaline  
batteries required — not included.

## ESTES E2X<sup>®</sup> STARTER SETS

### MEGA MAXX<sup>™</sup> EST 1474

The starter set contains the basics of the mega maxx rocket model and the speed of the rocket to reach its primary purpose. The only to build Goliath<sup>™</sup> delivers a truly great flight to 1000 feet. The mega maxx is a simple to build and fun to fly, while achieving the same level of performance as GOLIATH<sup>™</sup>.

**SPECS:** Skill Level: Above Beginner to Intermediate  
Length: 25 (77) cm. Dia.: 1.34 (34 mm) Wt.: 5.5 oz.  
(155 g). Recovery: 10 (30) cm. Parachute: 7" (18 cm) pack  
motor. Max. Altitude: 1000 feet (305 m). Recommended  
Engines: B6-2, B6-4, B6-5 (plus other 1/2" and 1/4" B6-5).

### SPITFIRE SSI<sup>™</sup>

**SPECS:** Skill Level: Beginner to Intermediate  
Length: 14 (44) cm. Dia.: 0.89 (22.5 mm) Wt.: 1.7 (48 g). Recovery: 12  
(30) cm. Parachute: 7" (18 cm). Max. Altitude: 1000  
(305 m). Recommended Engines: B6-2 and B6-4.

### SABRE<sup>™</sup> EST 1414

A simple to build rocket with a high level of performance. The  
starter set includes all the basics of the rocket to reach its primary  
purpose. The only to build Sabre<sup>™</sup> delivers a truly great flight to  
1000 feet. The sabre is a simple to build and fun to fly, while  
achieving the same level of performance as GOLIATH<sup>™</sup>.

**SPECS:** Length: 14 (44) cm. Dia.: 0.89 (22.5 mm) Wt.: 1.7 (48 g).  
Recovery: 12 (30) cm. Parachute: 7" (18 cm). Max. Altitude: 1000  
(305 m). Recommended Engines: B6-2 and B6-4.

### ALPHA III<sup>®</sup> EST 1460

The starter set contains the basics of the alpha iii rocket model and  
the speed of the rocket to reach its primary purpose. The only to build  
Alpha III<sup>®</sup> delivers a truly great flight to 1000 feet. The alpha iii is a  
simple to build and fun to fly, while achieving the same level of  
performance as GOLIATH<sup>™</sup>.

**SPECS:** Length: 14 (44) cm. Dia.: 0.89 (22.5 mm) Wt.: 1.7 (48 g).  
Recovery: 12 (30) cm. Parachute: 7" (18 cm). Max. Altitude: 1000  
(305 m). Recommended Engines: B6-2 and B6-4.





# StarterSets



## ELX SERIES

**SUPER SHOT™  
STARTER SET**  
← **SUPER SHOT™  
TWISTER™** ↓



**ROCKET TIP**

Apogee is the highest point in a rocket's flight.



**SPACE SHUTTLE™  
STARTER SET**



**HELICAT™  
STARTER SET**



**AIRWALKER™  
STARTER SET**



**SUPER SHOT™ EST 1449**

A two rocket combo with superb performance and a sky full of fun! The Super Shot™ rocket delivers high performance and includes recovery (parachute) to build kit. The second rocket, the Twister™, is a simple to build and paint kit featuring a nose cone and a streamer that will give you a night high. The Twister™ is a simple to build and paint kit featuring a nose cone and a streamer that will give you a night high. The Twister™ is a simple to build and paint kit featuring a nose cone and a streamer that will give you a night high. The Twister™ is a simple to build and paint kit featuring a nose cone and a streamer that will give you a night high.

**SUPER SHOT™**

**SPECS:** Skill Level: 1 (Belt™ Series) Length: 18" (45.7 cm) Dia.: 1.0" (25.4 mm) Wt.: 1.8 oz (51 g) Recovery: 12" (30 cm) Parachute. Fins: T™ plastic molded. Max. Altitude: 1000 ft (305 m). Recommended Engines: A6-3 (first flight), B4-4, B6-4, B6-5 (C6-5).

**TWISTER™**

**SPECS:** Skill Level: 1 (Belt™ Series) Length: 9.5" (24.1 cm) Dia.: 0.74" (18.8 mm) Wt.: 0.5 oz (14 g) Recovery: No. Fins: Die cut balsa. Max. Altitude: 1000 ft (305 m). Recommended Engines: 17A6-2 (first flight), A6-3, B4-4, B6-4, B6-5.

**HELICAT™ EST 1465**

A huge, rip-roaring rocket with helicopter nose cone. The nearly three foot tall rocket has a colorful, extra large decal sheet and engines for your first three flights!

**SPECS:** Length: 33.5" (85.1 cm), Dia.: 1.35" (34.3 mm), Wt.: 3.7 oz (105 g); Recovery: Rocket: 18" (46 cm) Parachute. Nose Cone: Helicopter; Fins: T™ plastic molded; Max. Altitude: 485 ft (148 m); Recommended Engines: B4-2, B6-2 (first flight), C6-3, C6-5 (includes three engines)

**SPACE SHUTTLE™ EST 1467**

Sport scale of the actual Space Shuttle Orbiter. Flies like the real thing! Rockets to 300 feet and glides back to Earth! The power pod returns with a parachute. Includes two engines for two missions!

**SPECS:** Length: 14.75" (37.5 cm); Wingspan: 10" (25.4 cm); Wt.: 7.0 oz (199 g); Recovery: Shuttle: Glider. Power Pod: 18" (46 cm) Parachute. Max. Altitude: 300 ft (91 m); Recommended Engine: C6-3 only (includes two engines)

**AIRWALKER™ EST 1410**

Sleek high performance payload rocket. The Airwalker™ can carry bugs, flowers or toy figures into the sky. Launch payloads to over 1000 feet high; get 'em back on a chute! Special chrome colored reflective body tube.

**SPECS:** Length: 20" (50.8 cm), Dia.: 1.0" (25.4 mm); Wt.: 2.0 oz (57 g); Recovery: 12" (30 cm) Parachute. Fins: T™ plastic molded; Max. Altitude: 1000 ft (305 m). Recommended Engines: A6-3 (first flight), B4-4, B6-4, C6-3, C6-5 (includes three engines)

Recommended Age: 10 years and up. Adult supervision for those under 18. Assembly: glue and tape. EA may require additional tools. Not included.





**built  
READY  
to Fly**

**NEW!**



**HYPER X™**

**NEW!**



**RED STORM™**

**NEW!**



**ASTEROID HUNTER™**



← **X-FLYER™ 1**  
**X-FLYER™ 2** ↓

**NEW!**



**INVADER™**

## READY TO FLY (RTF) ROCKETS

Every Estes Ready To Fly rocket is a complete, ready-to-launch system. They are loaded with everything you need to get them into the air. The rockets are constructed with strong, lightweight materials and a precision body.

### **RED STORM™** EST 1803

The Red Storm™ is a complete, ready-to-launch system. It stands over 19.5" high. The Red Storm is loaded with everything you need to be a high flying rocket. It features a 12" parachute.

**SPECS:** Length: 19.5" (49.5 cm); Dia: 1.5" (38.1 mm);  
Wt: 2.7 oz (75 g); Recovery: 12" (30 cm) assembled  
parachute; Fins: T™ Plastic molded; Max. Altitude: 506 ft  
(153 m); Recommended Engines: B4-4, B6-4 (first flight only).

### **HYPER X™** EST 1804

The Hyper X™ is sure to complement your rocket arsenal. The Hyper X™ is 19.5" tall and has a two-stage recovery system. The booster returns to earth using an assembled 12" parachute while the nose cone descends gently using foam blades. It's great fun to watch and fly!

**SPECS:** Length: 19.5" (49.5 cm); Dia: 1.5" (38.1 mm);  
Wt: 3.1 oz (88 g); Recovery: 12" (30 cm) assembled  
parachute; Fins: T™ Plastic molded; Max. Altitude: 506 ft  
(153 m); Recommended Engines: B4-4, B6-4 (first flight only),  
B8-4, C6-5.

### **ASTEROID HUNTER™** EST 1805

The Asteroid Hunter™ is an attractive sport rocket at 19.5" in length and has a sleek, aerodynamic design. Attach the assembled 12" parachute and you can be on your way! Over 1,000 feet in altitude is possible with the Asteroid Hunter™.

**SPECS:** Length: 19.5" (49.5 cm); Dia: 1.5" (38.1 mm);  
Wt: 1.8 oz (50 g); Recovery: 12" (30 cm) assembled  
parachute; Fins: One piece plastic molded; Max. Altitude:  
1025 ft (312 m); Recommended Engines: A6-3 (first flight only),  
B4-4, B6-4, C6-5, C6-7.

### **X-FLYERS™** EST 1806

The X-Flyers™ are a spectacular new pair of Ready To Fly rockets. These two terrific high performance rockets will tear up the skies. Both are equipped with an assembled 12" parachute. They can soar to over 1,000 feet.

**SPECS:** Length: #1 - 14.5" (36.8 cm); #2 - 13.5" (34.3 cm);  
Dia: #1 - 0.74" (18.7 mm); #2 - 0.74" (18.7 mm);  
Wt: #1 - 0.7 oz (21 g); #2 - 0.7 oz (21 g); Recovery: Two 12"  
(30 cm) assembled parachutes; Fins: One piece plastic molded;  
Max. Altitude: #1 - 1425 ft (434 m); #2 - 1325 ft (403 m);  
Recommended Engines: 1/2A6-2, A50 (first flight only), C6-7.

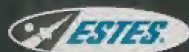
### **REDIROCS™ INVADER™** EST 2122

Ready to fly - As beautiful as they are fast, the Redirocs™ Invader™ are a high speed rocket. They are loaded with everything you need to get them into the air. The rockets are constructed with strong, lightweight materials and a precision body.

**SPECS:** Length: 14.5" (36.8 cm); Wt: 1.8 oz (50 g); Recovery:  
Two 12" (30 cm) assembled parachutes; Fins: One piece plastic molded;  
Max. Altitude: 1025 ft (312 m); Recommended Engines: 1/2A6-2, A50 (first flight only), C6-7.

Recommended for ages 10 years and up. Adult supervision for those under 12. Launch equipment and flight supplies required - not included.





# E2X SERIES

**Almost Ready to Fly  
(E2X® Series)**

- Great First Rockets!
- No Painting Required
- Assemble in about  
an hour

**MK-109 STINGRAY™**

**ASTROSAT LSX™**

**NEW!**

**BANDIT™**

**FLASH™**

**RATTLER-7™**

• Recommended for ages 10 years and up. Adult supervision for those under 12.  
Assembly, glue, launch equipment and flight supplies required – not included.

**RATTLER-7™**

EST 2154

10000 degree Fahrenheit heat of the motor is 15 times greater than the sun! More you can learn about rockets at [www.estesrockets.com](http://www.estesrockets.com). Includes a 10000 degree Fahrenheit heat of the motor is 15 times greater than the sun! More you can learn about rockets at [www.estesrockets.com](http://www.estesrockets.com).

**SPECS:** Length: 16.5" (41.9 cm); Dia.: 1.98" (50.3 mm);  
Wt.: 1.5 oz (42 g); Recovery: 12" (30 cm) Parachute; Fins: 7" plastic molded; Max. Altitude:  
1000 ft (305 m); Recommended Engines: B4-2, B6-2, B6-5, B6-6, B6-7

**ASTROSAT LSX™**

EST 2133

AstroSat LSX™ (Light Satellite Experiment) is a two-stage rocket equipped with a satellite at the end of its second stage. This recovery vehicle flies missions up to 300 feet. Easy to assemble – no painting and parachute for easy recovery.

**SPECS:** Length: 19" (48.3 cm); Dia.: 1.25" (31.8 mm);  
Wt.: 3.2 oz (91 g); Max. Altitude: 300 ft (91 m); Recovery:  
18" (46 cm) Parachute; Fins: 7" plastic molded;  
Recommended Engines: B4-2, B6-2 (first flight), B6-5, B6-6, B6-7

**BANDIT™**

EST 2060

Rugged, sleek and mercurial, performance over time – altitude up to over 1000 feet and every flight recovers with a splash!

**SPECS:** Length: 16" (40.6 cm); Dia.: 1.0" (25.4 mm);  
Wt.: 1.6 oz (45 g); Recovery: 12" (30 cm) Parachute; Fins:  
7" plastic molded; Max. Altitude: 1000 ft (305 m);  
Recommended Engines: A8-3 (first flight), B4-2, B6-5,  
B6-6, C6-5, C6-7

**MK-109 STINGRAY™**

EST 2131

Stingray is a two-stage rocket with a 10000 degree Fahrenheit heat of the motor is 15 times greater than the sun! More you can learn about rockets at [www.estesrockets.com](http://www.estesrockets.com).

**SPECS:** Length: 20" (50.8 cm); Dia.: 1.0" (25.4 mm);  
Wt.: 1.7 oz (47 g); Recovery: 12" (30 cm) Parachute; Fins:  
7" plastic molded; Max. Altitude: 1000 ft (305 m);  
Recommended Engines: A8-3 (first flight), B4-2, B6-5,  
B6-6, C6-5, C6-7

**FLASH™**

EST 2152

A sleek, aerodynamic rocket with a 10000 degree Fahrenheit heat of the motor is 15 times greater than the sun! More you can learn about rockets at [www.estesrockets.com](http://www.estesrockets.com).

**SPECS:** Length: 20" (50.8 cm); Dia.: 1.0" (25.4 mm);  
Wt.: 1.7 oz (47 g); Recovery: 12" (30 cm) Parachute; Fins:  
7" plastic molded; Max. Altitude: 1000 ft (305 m);  
Recommended Engines: A8-3 (first flight), B4-2, B6-5,  
B6-6, C6-5, C6-7

**FLASHES IN  
THE SKY!**





**BANSHEE™**



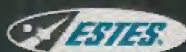
No parking, please, here, folks! In under an hour! A quick way to get into pyrotechnics. Cool pre-colored body tubes and steel decade fountains in 15-foot performers.

Howl at the sun with this screaming bad boy! Lean and mean! Quick to turn! The high performance design assures maximum altitude every time. Features parachute recovery!

**SPECS:** Length: 18.6 (422 cm) **Dis.:** 1.0 (25.4 mm)  
**Wt.:** 1.6 kg (45 g) **Recovery:** 12" (30 cm) Parachute  
**Fins:** TPU plastic molded **Max. Altitude:** 1100 ft (335 m)  
**Recommended Engines:** A8-3 (First flight) B4-4 B6-4 B8-6  
C6-5 C6-7

100





# ELX SERIES



**BAIL-OUT™**



**OMLOID™**



**MACH-12™**



## ROCKET TIP

Payloading is the science of carrying "stuff" into near-earth orbit. Launch toy action figures, flowers, glow sticks, marbles, eggs, real science experiments, etc.



**X-RAY™**



**HIJAX™**

## BAIL-OUT™ EST 2070

This "transport" rocket carries your favorite Estes Space Launch 1000 ft. Altitude model rocket & launches it safely! Can carry any size of figure - launch NOT required. Time to launch is 10 seconds and recovery is 10 seconds. Includes 100 ft. of streamer.

**SPECS:** Length: 24" (61 cm), Dia.: 1.5" (38 mm), Wt.: 1.9 oz (55 g), Recovery: 10" (25 cm), Streamer: 100 ft. (30 m), Pre-colored, one-piece fin unit for a quick assembly! Streamer allows for quick, easy and safe recovery!

## OMLOID™ EST 2075

Egg holding rocket & egg holder. A high performance rocket. It's the Omloid is egg and comes with a streamer payload unit. Launch 100 ft. Altitude model rocket & launches it safely!

**SPECS:** Length: 24" (61 cm), Dia.: 1.5" (38 mm), Wt.: 1.9 oz (55 g), Recovery: 10" (25 cm), Streamer: 100 ft. (30 m), Pre-colored, one-piece fin unit for a quick assembly! Streamer allows for quick, easy and safe recovery!

## MACH-12™ EST 2130

So different, with every flight! Mach-12 offers the best performance of any rocket. Launching the Mach-12 is a quick assembly! Streamer allows for quick, easy and safe recovery!

**SPECS:** Length: 21.3" (54.1 cm), Dia.: 1.35" (34.3 mm), Wt.: 1.9 oz (55 g), Recovery: 10" (25 cm), Streamer: 100 ft. (30 m), Pre-colored, one-piece fin unit for a quick assembly! Streamer allows for quick, easy and safe recovery!

## X-RAY™ EST 2034

Mini-engine boosted rocket with its clear payload capsule! Pre-colored, one-piece fin unit for a quick assembly! Streamer allows for quick, easy and safe recovery!

**SPECS:** Length: 14.8" (37.6 cm), Dia.: 0.74" (18.8 mm), Wt.: 0.6 oz (17 g), Recovery: Streamer, Fins: One piece plastic, molded, Max. Altitude: 500 ft (152 m), Recommended Engines: A24-2T (first flight), A3-AT, A10-3T

## HIJAX™ EST 2105

Clear payload capsule, high performance design and simple to build with no painting makes this an ideal first cargo carrying rocket!

**SPECS:** Length: 21" (53.3 cm), Dia.: 1.5" (38 mm), Wt.: 1.9 oz (55 g), Recovery: 10" (25 cm), Streamer: 100 ft. (30 m), Pre-colored, one-piece fin unit for a quick assembly! Streamer allows for quick, easy and safe recovery!

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, glue, launch equipment and flight supplies required - not included.





# E2X SERIES

# BETA SERIES

## Level 1 (Beta™ Series)

- Quick and easy-to-build kits with some sanding, cutting and painting required.
- Most kits feature our T™ (Through-The-Tube) Fin System

## ROCKET TIP

Featherweight recovery means the rocket is so lightweight, the engine ejects and the rocket returns safely to the ground.

## MOSQUITO™

## QUARK™

## NINJA®

## ALMOST READY TO FLY (E2X™ SERIES) ROCKETS

### SKYWINDER™ EST 2017

The easiest way to get into 3D modeling. This kit includes everything you need to build a rocket that will fly skyward. At apogee the blades fold out and the motor returns the rocket back to earth. Easy to build, easy to fly.

**SPECS:** Length: 20" (50.8 cm); Dia: 1.35" (34.3 mm); Rotor span: 20.0" (50.8 cm); Wt.: 2.5 oz (71 g); **Recovery:** Helicopter; **Fins:** T™ Plastic molded; **Max. Altitude:** 531 ft (162 m); **Recommended Engines:** B4-2 (first flight), B6-2, C6-3

### TURBO COPTER™ EST 2095

Hot Stuff! With a wild helicopter recovered nose cone and an ultra performance design, this rocket is out-of-sight! Features a one-piece fin unit and no painting required!

**SPECS:** Length: 13.9" (35.3 cm); Dia: 0.74" (18.7 mm); Wt.: 0.9 oz (26 g); **Recovery:** Nose cone; Helicopter; **Rocket:** Streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 1400 ft (427 m); **Recommended Engines:** 1/2A6-2 (first flight), A8-3, B4-4, B6-4, B6-6, C6-5, C6-7

### MANTA™ EST 2097

Futuristic-looking foam glider (not piggyback on the booster). At apogee the glider detaches for its long glide home. Easy to build, no painting!

**SPECS:** Length: 16.5" (41.9 cm); Dia.: 0.98" (24.8 mm); Wt.: 1.8 oz (51 g); **Recovery:** Glider; **Booster:** streamer; **Fins:** One piece plastic molded; **Max. Altitude:** 690 ft (210 m); **Recommended Engines:** A8-3 (first flight), B4-2, B6-2

## LEVEL 1 (BETA™ SERIES) ROCKETS

### QUARK™ EST 0802

Mini-engine powered mighty mite. With incredibly simple construction (only seven parts), a little spray paint and decals, and whoosh – out-a-sight flights to 700 feet! Safe featherweight recovery for this micro rocket!

**SPECS:** Length: 5.2" (13.2 cm); Dia.: 0.54" (13.7 mm); Wt.: 0.1 oz (3 g); **Recovery:** Featherweight; **Fins:** Balsa; **Max. Altitude:** 700 ft (213 m); **Recommended Engines:** 1/2A3-4T (first flight), A3-4T, A10-3T

### MOSQUITO™ EST 0801

Mini-engine powered bug of a rocket with screaming high altitude performance. Featherweight recovery for safe returns.

**SPECS:** Length: 3.6" (9.9 cm); Dia.: 0.54" (13.7 mm); Wt.: 0.1 oz (2.8 g); **Recovery:** Featherweight; **Fins:** Balsa; **Max. Altitude:** 800 ft (244 m); **Recommended Engines:** 1/2A3-4T (first flight), A3-4T, A10-3T

### NINJA® EST 0882

Lightning quick performance and super attitudes on mini-engine power. Die cut card fins and hot melt adhesive discard.

**SPECS:** Length: 10.6" (26.9 cm); Dia.: 0.74" (18.7 mm); Wt.: 0.6 oz (16 g); **Recovery:** Streamer; **Fins:** Die cut card; **Max. Altitude:** 521 ft (160 m); **Recommended Engines:** 1/2A3-4T (first flight), A3-4T, A10-3T

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, construction supplies, glue, launch equipment and flight supplies required – not included.



**NEW!**

# BETA

## SERIES

**NEW!**

**AIM-120**  
**AMRAAM**

**BIG DAWG™**

**PROWLER™** FEB 2002

**SPEED Limits:** 40-110 mph. **94-110 mph** (110 mph)  
**Wt:** 42-64 lbs. **64-110 lbs.** (110 lbs.)  
**Dimensions:** 110-110 in. **110-110 in.** (110 in.)  
**110 in.** **Recommended Engines:** 94-110-2 (110-2)  
**05-3, C6-3**

## ZENIX SSRV™ EST 2152

SPECS: Length: 51.0 (50.5-51.5) in. Dia.: 1.75 (1.7-1.8) in.  
 WT.: 4.5 (4.0-5.0) lb. Recovery: Excellent (Good to Fair)  
 Main body dia.: .38 in. (0.35-0.40) in. (standard) .40 in. (100% Flow)  
 Inside Dia.: Max. Airline: 3/8 in. (1/2 in.) Recommended  
 Engine: B4-2 (6-2 in. hose) C-4 (2-2)

## AIM-120 AMRAAM EST 2153

**SPECS:** Length: 27 ft. (8.2 m); Dia.: 1.22-1.32 m (4'-0"-4'-4");  
**WL:** 4.2 m (13.8 ft); **Recovery:** 10-140 km (6-87 mi);  
**Propulsion:** Fins: 17th Div. and Cetus; **Max. altitude:** 401 ft  
 (122 m); **Recommended Engines:** 14 ft (4.3 m) long; **Recovery:**  
 1.5 ft (0.46 m)

**WILDFIRE™** ES1 2150

**SPECs:** Length: 157 (153 cm), Dis.: 11.6" (12.4 mm)  
**WL:** 1.62 (1.59 g) **Record:** 172 (160 cm), unmeasured max. chin  
 and 18" (46 cm) unmeasured. **Fins:** 17" (16 cm) total  
**Max. Altitude:** 1027 ft (313 m) **Recommended Engine:**  
 1-PAG-2 4B-3 (4000 ft), 92-4, 95-4, 96-4, 97-4

**NEW!**

**GLOW-IN-THE-DARK  
DISPLAY STICKERS**

**NEW!**

**NEW!**

**BIG DAWG™**

**PROWLER™**

ZENIX SSRV™

**WILDFIRE™**

## ROCKET TIP

These rockets have the T™ Fin System. The body tube on the rocket has been slotted and the fins fit through the slot. This makes the fin joint strong and properly aligned.

T is a trademark of Estes Industries.





## BETA SERIES



**YELLOW JACKET™**



**WIZARD™**



**BIG BERTHA™**



**YANKEE™**



**ALPHA®**



**NOVA PAYLOADER™**

### **YELLOW JACKET™** EST 2066

A rocket with a lot of zip. All-around great performance highlights this sport rocket. Easy to build with water transferable decal!

**SPECS:** Length: 16.8" (42.7 cm); Dia.: 0.98" (25.1 mm);  
**Wt.:** 1.1 oz (31 g); **Recovery:** 12" (30 cm) Parachute;  
**Fins:** Die cut balsa; **Max. Altitude:** 1500 ft (457 m);  
**Recommended Engines:** A8-3 (first flight), B4-4, B6-4,  
B6-6, C6-5, C6-7

### **WIZARD™** EST 1292

No tricks here—the Wizard™ is an easy-to-build high-performance kit. Featuring die cut balsa, water and adhesive decals, the Wizard™ comes complete with bright streamer for soft, safe landings. A great first or second kit that provides real excitement and fun!

**SPECS:** Length: 12" (30.5 cm); Dia.: 0.74" (18.8 mm);  
**Wt.:** 0.8 oz (23 g); **Recovery:** Streamer; **Fins:** Die cut balsa;  
**Max. Altitude:** 1200 ft (366 m); **Recommended Engines:**  
1/2A6-2 (first flight), A8-3, B4-4, B6-4, B6-6,  
C6-5, C6-7

### **BIG BERTHA™** EST 1348

Big, big and beautiful! This big beauty shows what a big (and fun) rocket can really be! Easy to build. Lots of fun! (and lots of fun to watch!)

**SPECS:** Length: 14" (35.6 cm); Dia.: 1.0" (25.4 mm);  
**Wt.:** 2.2 oz (62 g); **Recovery:** 18" (45.7 cm) Parachute; **Fins:**  
Die cut balsa; **Max. Altitude:** 2000 ft (610 m); **Recommended Engines:**  
B4-2, B4-4, B6-4 (first flight), B6-6, C6-7

### **YANKEE™** EST 1381

A rocket with A-4 style performance—comes to 1500 foot altitude! Comes with water transferable decal for your red, white and blue look.

**SPECS:** Length: 11" (27.9 cm); Dia.: 0.74" (18.8 mm);  
**Wt.:** 0.4 oz (12 g); **Recovery:** Streamer; **Fins:** Die cut balsa;  
**Max. Altitude:** 1400 ft (427 m); **Recommended Engines:**  
1/2A6-2 (first flight), A8-3, B4-4, B6-4, B6-6,  
C6-5, C6-7

### **ALPHA®** EST 1225

For over 30 years, the Alpha® has been the first choice for millions of rocket modelers. Easy to build, rugged high performance, parachute recovery—the perfect rocket to get you started!

**SPECS:** Length: 12.3" (31.2 cm); Dia.: 0.98" (24.9 mm);  
**Wt.:** 0.8 oz (23 g); **Recovery:** 12" (30 cm) Parachute; **Fins:**  
Die cut balsa; **Max. Altitude:** 1000 ft (305 m); **Recommended Engines:**  
1/2A6-2, A8-3 (first flight), B4-4, B6-4, B6-6,  
C6-5, C6-7

### **NOVA PAYLOADER™** EST 1960

Clear payload capsule, lightweight design with balsa fins and high altitude performance combine to make this a great cargo carrying rocket!

**SPECS:** Length: 21.1" (53.6 cm); Dia.: 0.98" (24.9 mm);  
**Wt.:** 1.5 oz (38 g); **Recovery:** 12" (30 cm) Parachute;  
**Fins:** Die cut balsa; **Max. Altitude:** 1000 ft (305 m);  
**Recommended Engines:** A8-3 (first flight), B4-4, B6-4,  
C6-5, (With payload) B4-2, B6-2, C5-3, C6-3

Recommended for ages 10 years and up. Adult supervision for those under 12.  
Assembly, construction materials, glue, launch equipment and flight supplies required—not included.





**FIREBIRD™**

Recommended for ages 10 years and up.  
Adult supervision for those under 12.  
Assembly, construction supplies, glue,  
launch equipment and flight supplies  
required — not included.



**FATBOY™**



**SIZZLER®**



**FIRE STREAK™**



**CORKSCREW™**



**FIREBIRD™ EST 2138**

Too hot to hold back! Push down on the side with this fantastic hot-to-touch and speed heat trigger! Through test and 10,000 feet high flight after flight.

**SPECS:** Length: 22.9" (58.1 cm); Dia.: 1.50" (38.1 mm);  
WT.: 2.1 oz (60 g); Recovery: 18" (46 cm) Parachute;  
Fins: 1" Dia cut base; Max. Altitude: 1000 ft (305 m);  
Recommended Engines: A5-3 (first flight), B4-4, B6-4,  
C6-5, C6-7

**FATBOY™ EST 2139**

Fat boy...and proud of it! Dyes 2-1/2 inches in diameter and just over 12 inches high! Holds its way to over 300 feet in altitude and recovers with a crash!

**SPECS:** Length: 12.5" (31.8 cm); Dia.: 2.50" (63.5 mm);  
WT.: 3.0 oz (85 g); Recovery: 18" (46 cm) Parachute;  
Fins: 1" Dia cut base; Max. Altitude: 325 ft (100 m);  
Recommended Engines: B4-2, B6-2 (first flight), C5-3, C6-3

**SIZZLER® EST 2127**

Hot looking rocket over hot heat! Fantastic performance — blazes to 400 feet. Features a real working engine port, displaying a huge parachute at apogee. No landing needed!

**SPECS:** Length: 22.8" (58.4 cm); Dia.: 1.64" (41.7 mm);  
WT.: 3.5 oz (110 g); Recovery: 18" (46 cm) Parachute;  
Fins: 1" Dia cut base; Max. Altitude: 400 ft (122 m);  
Recommended Engines: B4-2, B6-2 (first flight),  
C5-3, C6-3, C6-5

**FIRE STREAK™ EST 2107**

Two long, rainbow-looking red and gold recovery streamers! Flying at 1000 feet! (Not large decal on) high altitude performance!

**SPECS:** Length: 14.3" (36.3 cm); Dia.: 1.0" (25.4 mm);  
WT.: 1.4 oz (39 g); Recovery: Dual Streamers; Fins: 1" Dia cut base; Max. Altitude: 1000 ft (305 m); Recommended Engines: A5M-2, A6-2 (first flight), B4-4, B6-4, B6-5, C6-5

**CORKSCREW™ EST 2114**

Spool up! Spin for position! Makes this rocket spin and spiral on the way up! The Corkscrew™ leaves wild, wacky trails in the sky! Easy to build — great fun to fly!

**SPECS:** Length: 21.3" (54.1 cm); Dia.: 1.0" (25.4 mm);  
WT.: 1.5 oz (50 g); Recovery: 12" (30 cm) Parachute;  
Fins: 1" Dia cut base; Max. Altitude: 800 ft (244 m);  
Recommended Engines: A5-3 (first flight), B4-4, B6-2,  
B6-4, C6-3, C6-5





TRANSWING™  
SUPER GLIDER



ASTROCAM® 110



TAKE  
PICTURES  
FROM  
HIGH UP!



VIKING™

Recommended for ages 10 years and up.  
Adult supervision for those under 12.  
Assembly, construction supplies, glue,  
launch equipment and flight supplies  
required - not included.

TWO STAGE  
FUN!

MONGOOSE™



VENOM™

TRANSWING™ SUPER GLIDER

EST 2112

Blazes off the pad like a rocket but at apogee, the power pod falls away, releasing the wings and the Transwing™ transforms into a long duration glider. Easy to build - no painting! Flights over one minute are possible!

**SPECS:** Length: 22" (55.9 cm); Dia.: 0.98" (24.9 mm);  
Glider Wingspan: 24" (61 cm); Total Wt.: 3.6 oz. (103 g);  
Recovery: Glider, Power Pod, Streamer; Fins: Die cut balsa;  
Max. Altitude: 305 ft (93 m); Recommended Engines:  
B4-2, B6-2 (first flight), C6-3

ASTROCAM® 110

EST 1327

Wests it look like from up there? This camera rocket gives you the big picture - hundreds of feet up! EASY to build, NO painting - almost ready to fly! Simple to use and fly. Kit includes camera (type 110, 200 ASA film - not included).

**SPECS:** Length: 14.1" (35.7 cm); Dia.: 1.34" (34 mm);  
Wt.: 3.7 oz. (105 g); Camera shutter speed: 1/200 sec.;  
Top: 11; Recovery: 12" (30 cm) Parachute; Fins: Die  
piece plastic molded; Max. Altitude: 500 ft (152 m);  
Recommended Engines: C6-7 only!

VIKING™

EST 1949

Fantastic rocket with multiple possible fin configurations - 48 in all! Features the eye and fin, self-adhesive decal, and streamer recovery. Slows high altitude flights!

**SPECS:** Length: 12.1" (30.7 cm); Dia.: 0.74" (18.8 mm);  
Wt.: 0.6 oz. (17 g); Recovery: Streamer; Fins: Die cut card;  
Max. Altitude: 1470 ft (448 m); Recommended Engines:  
A8-3 (first flight), B4-4, B6-4, C6-5, C6-7

MONGOOSE™

EST 2092

Shakes won't get close to this one! Perfect first two stage rocket! Super quick to build with high altitude performance - over 1000 feet! Pre-colored with two line-art fin units, crazy-looking self-adhesive decals.

**SPECS:** Length: 26.5" (67.3 cm); Dia.: 0.98" (24.9 mm);  
Wt.: 2.3 oz. (65 g); Recovery: Streamer; Fins: One piece  
plastic molded; Max. Altitude: 1600 ft (488 m);  
Recommended Engines: Single Stage Flight - A8-3 (first  
flight), B4-4, B6-4, C6-5; Two Stage Flight: Booster Stage -  
B6-0 (first flight), C6-0; Second Stage - B6-5 (first flight), C6-7

VENOM™

EST 2140

No one knows what part of the universe this rocket comes from, but it's got attitude, altitude and sneaky good looks - quick strikes to 1100 feet!

**SPECS:** Length: 18.5" (47 cm); Dia.: 0.98" (24.9 mm);  
Wt.: 1.2 oz. (34 g); Max Altitude: 1100 ft (335 m);  
Recovery: 12" (30 cm) Parachute; Fins: T™ Die cut balsa;  
Recommended Engines: A8-3 (first flight), B4-4, B6-4,  
B6-6, C6-5, C6-7





**F-22 AIR  
SUPERIORITY  
FIGHTER™**

Recommended for ages 10 years and up.  
Adult supervision for those under 12.  
Assembly, construction supplies, glue, launch  
equipment and flight supplies required – not included.



**ZINGER™**

**CAUTION -  
ALIEN  
INSIDE!**



**VENUS PROBE™**



**AIM-9 SIDEWINDER™**

## F-22 AIR SUPERIORITY FIGHTER™

**EST 2124**  
The fastest aircraft in the entire Beta Series! The F-22 features a unique dual engine design that allows it to take off, climb, cruise, and maneuver out of the sky. It's a true battle ship and bomber.  
**SPECS:** Length: 11.5" (29.3 cm); Wingspan: 6.5" (16.5 cm); Body Wt: 1.5 oz (42.5 g); Total Length: 25.5" (64.8 cm); Dia: 1.02" (25.8 mm); Wt: 1.5 oz (42.5 g); Recovery: Under A Parachute; Fly 1000 ft (305 m); Fin: T™ Dip cut balsa; Recommended Engines: C5-3 (first flight), C6-3 (2nd flight)

## ZINGER™ EST 1911

A great paper rocket for kids! With a unique body design, it performs like a rocket! It's a true battle ship and bomber.  
**SPECS:** Length: 10.5" (26.7 cm); Dia: 0.75" (19.1 mm); Wt: 0.5 oz (14.2 g); Wingspan: 2.5" (6.4 cm); Recovery: Under A Parachute; Fly 1000 ft (305 m); Fin: T™ Dip cut balsa; Recommended Engines: C5-3 (first flight), C6-3 (2nd flight)

## VENUS PROBE™ EST 2120

Find the Truth! Mothership deploys alien lander (own included!) Lander extends legs and descends under its own parachute – lands upright every time! Mothership returns on its own "chute".  
**SPECS:** Length: 27" (68.6 cm); Dia: 1.33" (33.8 mm); Wt: 5.1 oz (145 g); Landing Gear Span: 24" (61 cm); Alien Lander Ht: 10.5" (26.7 cm); Recovery: 12" (30 cm) and 18" (46 cm) Parachute; Fin: T™ Dip cut balsa; Max. Altitude: 250 ft (76 m); Recommended Engines: C5-3 (first flight), C6-3 (2nd flight)

## AIM-9 SIDEWINDER™ EST 2125

Get a 1:4 scale model of the famous air-to-air missile! Model comes complete with photo Helium nose cone and the T™ Fin Mounting System for extra and more convenient use.  
**SPECS:** Length: 10.5" (26.7 cm); Dia: 1.33" (33.8 mm); Wt: 4.2 oz (119 g); Recovery: 12" (30 cm) and 18" (46 cm) Parachute; Fin: T™ Dip cut balsa; Max. Altitude: 250 ft (76 m); Recommended Engines: C5-3 (first flight), C6-3 (2nd flight)



# EXPLORER SERIES

- Level 2 (Explorer™ Series)
- Requires more skill in building and painting
- Includes rockets that use Estes "D" engines

**D ENGINE  
POWER**

**NEW!**



**D ENGINE  
POWER**



**SILVER COMET™**

Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, construction supplies, glue, launch equipment and flight supplies required - not included.



**SM-3 SEAHAWK™**



**GEMINI DC™**



**PYTHON™**

**NEW!**

**SUPER NOVA  
PAYLOADER™**



**MEAN  
MACHINE™**

## **SILVER COMET™** EST 2141

Attention all fans of "retro" science fiction, your space ship has landed! Great details, blow molded tail and nose cone and "D" engine power are featured in this giant nostalgic-styled spacecraft.

**SPECS:** Length: 25" (63.5 cm), Dia.: 2.60" (66.0 mm), Wt.: 5.1 oz (145 g), Max. Altitude: 500 ft (152 m), Recovery: 18" (46 cm) Parachute, Fins: T™ Die cut balsa, Recommended Engines: D12-3 (first flight), D12-5 Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) - available separately.

## **SM-3 SEAHAWK™** EST 2149

This "D" engine powered, single stage rocket stands over three feet tall and uses the mighty Estes D12 rocket engine to launch it hundreds of feet into the air. The SM-3 Seahawk™ utilizes two fully assembled 18" parachutes for recovery. It incorporates plastic fins with slotted body tubes for easy assembly and quick finishing. This is a must for every big rocket enthusiast.

**SPECS:** Length: 39.5" (100.3 cm), Dia.: 1.84" (46.7 mm), Wt.: 6.2 oz (175 g), Recovery: two 18" (46 cm) assembled parachutes, Fins: T™ Plastic molded, Max. Altitude: 465 ft (142 m), Recommended engine: D12-5 only. Requires a 3/16" (5 mm) Maxi™ launchrod (EST 302244) - available separately.

## **GEMINI DC™** EST 2136

Twin parachutes are rear-ejected from the nose pods on this stunning rocket. Nearly out of this world flight. Easy to build! A great tier! A unique rocket!

**SPECS:** Length: 21.5" (54.6 cm), Dia.: 0.90" (22.9 mm), Wt.: 3.4 oz (95 g), Recovery: Dual 12" (30 cm) Parachutes, Fins: T™ Die cut balsa, Max. Altitude: 800 ft (244 m), Recommended Engines: B4-2, B4-4, B6-2 (first flight), B6-4, C6-5

## **PYTHON™** EST 2129

The main air-to-air missile of the Estes Space Corps! High performance plastic fins and scale like decal. Big "D" engine power!

**SPECS:** Length: 33.3" (84.6 cm), Dia.: 1.84" (46.7 mm), Wt.: 5.6 oz (160g), Recovery: 18" (46 cm) Parachute, Fins: T™ Plastic Molded, Max. Altitude: 500 ft (152 m), Recommended Engines: D12-5 (first flight), D12-7 Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) - available separately.

## **SUPER NOVA PAYLOADER™** EST 2155

Using the powerful Estes "D" engine, the Super Nova Payloader™ lifts your specimen hundreds of feet into the air. The large, clear payload section allows you to stock it with science experiments, bugs, small action figures or other exciting cargo. Pre-colored body tubes and plastic parts make this "D" engine powered payloader super to build and fly.

**SPECS:** Length: 46.5" (118.1 cm), Dia.: 1.94" (49.3 mm), Wt.: 6.2 oz (175 g), Recovery: 24" (61 cm) parachute, Fins: T™ Plastic molded, Max. Altitude: 500 ft (152 m), Recommended Engines: D12-5 only. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) - available separately.

## **MEAN MACHINE™** EST 1295

Stand back from this beauty! Over six feet of rocket with kick-in-the-pants "D" power to boot. Its long, lean looks and great soaring flights make this one of our most popular rockets.

**SPECS:** Length: 70.8" (180.2 cm), Dia.: 1.64" (41.7 mm), Wt.: 8.0 oz (104 g), Recovery: 24" (61 cm) Parachute, Fins: Die cut balsa, Max. Altitude: 500 ft (152 m), Recommended Engine: D12-5 only. Requires a 3/16" (5 mm) Maxi™ launch rod (EST 302244) - available separately.





# EXPLORER SERIES

D ENGINE  
POWER



MANIAC™



TWO  
GLIDERS

A.R.V.  
CONDOR™



TORNADO™



BULL PUP 12D™



SR-X™

LIFTING BODY  
GLIDER

D ENGINE  
POWER!

TWO STAGE FUN!



LONG  
SHOT™

BLACK BRANT II™



MANIAC™

A.R.V. CONDOR™

TORNADO™

BULL PUP 12D™

SR-X™

LONG SHOT™

BLACK BRANT II™

**MANIAC™** (EST 2110) This is a D engine powered rocket that is designed for high altitude flights. It features a long, slender body and a large, colorful fin. The rocket is painted in a yellow and blue design with a red and white star on the nose. It is a great choice for those who want to see their rocket go high into the sky.

**A.R.V. CONDOR™** (EST 2111) This is a D engine powered rocket that is designed for high altitude flights. It features a long, slender body and a large, colorful fin. The rocket is painted in a white and blue design with a red and white star on the nose. It is a great choice for those who want to see their rocket go high into the sky.

**TORNADO™** (EST 2112) This is a D engine powered rocket that is designed for high altitude flights. It features a long, slender body and a large, colorful fin. The rocket is painted in a white and blue design with a red and white star on the nose. It is a great choice for those who want to see their rocket go high into the sky.

**BULL PUP 12D™** (EST 2113) This is a D engine powered rocket that is designed for high altitude flights. It features a long, slender body and a large, colorful fin. The rocket is painted in a white and blue design with a red and white star on the nose. It is a great choice for those who want to see their rocket go high into the sky.

**SR-X™** (EST 2114) This is a D engine powered rocket that is designed for high altitude flights. It features a long, slender body and a large, colorful fin. The rocket is painted in a white and blue design with a red and white star on the nose. It is a great choice for those who want to see their rocket go high into the sky.

**LONG SHOT™** (EST 2115) This is a D engine powered rocket that is designed for high altitude flights. It features a long, slender body and a large, colorful fin. The rocket is painted in a white and blue design with a red and white star on the nose. It is a great choice for those who want to see their rocket go high into the sky.

**BLACK BRANT II™** (EST 2116) This is a D engine powered rocket that is designed for high altitude flights. It features a long, slender body and a large, colorful fin. The rocket is painted in a white and blue design with a red and white star on the nose. It is a great choice for those who want to see their rocket go high into the sky.





# 1998 CATALOG PRICE LIST

Items are listed in part number sequence



Prod. No.	Description	Sugg. Retail	Prod. No.	Description	Sugg. Retail	Prod. No.	Description	Sugg. Retail
<b>ESTES® MODEL ROCKETRY PRODUCTS</b>								
0801	Mosquito™	\$3.19	1768	X-Ray™ Bulk Pack (12 Pack)	39.99	2132	Banshee™	8.99
0802	Quark™	3.49	1769	Mach-12™ Bulk Pack (12 Pack)	119.99	2133	AstroSat LSX™	13.99
0834	X-Ray™	5.49	1770	Venom™ Bulk Pack (12 Pack)	69.99	2136	Gemini DC™	11.99
0835	Nike Arrow™	6.99	1771	Orion™ Bulk Pack (12 Pack)	109.99	2137	Flash™	10.99
0882	Nimrod™	5.09	1773	Sirius X-wing™ Fighter Bulk Pack (6 Pack)	64.99	2138	Fredbird™	10.99
0886	Gnomie™	5.29	1780	1/2A3-2T Engines Bulk Pack (24 Pack)	27.99	2139	Fat Boy™	11.99
1225	Alpha®	8.09	1781	A8-3 Engines Bulk Pack (24 Pack)	37.99	2140	Venom™	8.49
1256	Alpha II®	9.99	1783	B6-4 Engines Bulk Pack (24 Pack)	38.99	2141	Silver Comet™	19.99
1284	Space Shuttle™	27.99	1784	B6-0/B6-6 Engines Bulk Pack (12 each per Pack)	38.99	2149	SM-3 Seahawk™	22.99
1292	Wizard™	6.09	1785	C5-3 Engines Bulk Pack (24 Pack)	43.29	2150	Rattler-7™	8.99
1295	Mean Machine™	23.29	1786	Hi-Line® Light Glider Bulk Pack (12 Pack)	44.99	2151	Big Dawg™	8.99
1327	Astrocams® 110	30.69	1800	Quicksilver™ RTF Starter Set	26.99	2152	Zenith SSRV™	TBD
1380	Phoenix™	24.39	1803	Red Storm™ RTF	13.99	2153	AIM-120 AMRAAM	11.99
1381	Yankee™	5.09	1804	Hyper X™ RTF	13.99	2154	Wildfire™	8.49
1382	Comanche-3™	14.79	1805	Asteroid Hunter™ RTF	11.99	2155	Super Nova Payloader™	TBD
1406	Alpha II® Starter Set	31.79	1806	X-Flyers™ RTF	13.99	2156	Prowler™	12.99
1410	Arrow™ Starter Set	32.89	1811	Tidal Wave™ RTF Starter Set	26.99	2237	Transac II™ Rocket Locator	35.59
1449	Super Shock™ Starter Set	34.99	1812	Ionizer™ RTF Starter Set	26.99	2794	Ignite the Imagination™ Video	11.15
1458	Teacher's Starter Set	38.95	1813	AsiroCam® RTF Starter Set	39.99	2847	Science & Model Rockets Curriculum	3.65
1463	Designer's Special™	44.09	1814	Recon™ RTF Starter Set	34.99	2848	Physics & Model Rockets Curriculum	3.65
1465	HotCat™ Starter Set	33.89	1815	Shells&Rockets™ RTF Starter Set	34.99	2849	Mathematics & Model Rockets Curriculum	3.65
1467	Space Shuttle™ Starter Set	36.99	1816	Free Fall™ RTF Starter Set	29.99	2850	Industrial Technology & Model Rockets Curriculum	3.65
1474	Mega Maxx™ Starter Set	30.56	1817	Standuser™ RTF Starter Set	29.99	2851	Aviation & Light Gliders Curriculum	3.65
1503	1/2A3-2T Engines (4 pack)	4.79	1818	Missile Command™ RTF Starter Set	34.99	2852	Ignite the Imagination™ Curriculum	5.00
1504	1/2A3-4T Engines (4 pack)	4.79	1824	Code Red™ RTF Starter Set	29.99	2853	Star Wars X-wing™ Fighter Lesson Guide	2.00
1507	A3-4T Engines (4 pack)	4.79				7000	Bull Pup 12D™	9.99
1510	A10-OT Engines (4 pack)	4.79				7003	Sir-21 Blackbird™	17.99

## Challenge SERIES



SWING WING GLIDER!



TOMCAT™



PHOENIX™

COMANCHE-3™



THREE STAGES!



Prod. No.	Description	Sugg. Retail
302264	Parachute 12"	3.59
302267	Parachute 18"	3.69
302271	Parachute 24"	4.59
302274	Recovery Wadding	2.99
302275	Streamer Kit	5.79
302278	Shock Cords & Mount Pack	2.29
302295	Flat Centering Rings Pack	6.99
302296	Heavy Duty Centering Rings Pack	4.19
302297	Small Tube Coupler Pack	2.79
302301	Model Rocket Igniters (5 Pack)	2.99
302320	Launch Lug Pack	3.19
302995	Decal Pack	2.29
302996	Decal Pack	2.29
303084	BT-5 Body Tubes (4)	3.19
303085	BT-20 Body Tubes (4)	3.79
303086	BT-50 Body Tubes (3)	3.89
303087	BT-55 Body Tubes (3)	4.59
303088	BT-56 Body Tubes (3)	4.59
303089	BT-60 Body Tubes (3)	4.99
303090	BT-80 Body Tubes (2)	4.99
303091	HBT-1090 Body Tubes (3)	3.99
303143	Engine Hook Accessory Pack	3.49
303157	Mini-Engine Mount Kit	3.79
303158	Regular Engine Mount Kit	4.69
303159	D & E Engine Mount Kit	5.79
303160	NC-5 Nose Cones (5 Pack)	4.29
303161	NC-20 Nose Cones (5 Pack)	4.49
303162	NC-50 Nose Cones (5 Pack)	4.49
303163	NC-55 Nose Cones (4 Pack)	5.29
303164	NC-56 Nose Cones (4 Pack)	4.59
303165	NC-60a Nose Cones (2 Pack)	4.59
303166	NC-60b Nose Cones (2 Pack)	4.59
303167	NC-60a Nose Cones (1 Pack)	3.99
303168	NC-60b Nose Cones (1 Pack)	3.99
303169	NC-1090 Nose Cones (4 Pack)	4.99
303193	Dowel, Fin Stock & Patterns Pack	4.99
303194	Payload Section PS-20 & PS-60/55	4.99
303195	Payload Section PS-55/60	4.99
303196	Large Tube Coupler Pack	4.69

#### COX® MODEL PRODUCTS

C00100	Pea Wee .020	44.99
C00130	Tee Dee® .010	64.99
C00150	Black Widow .049	44.99
C00170	Tee Dee® .049	64.99
C00210	Tee Dee® .09	64.99
C00340	Killer Bee .049	44.99
C00350	Babe Bee .049	34.99
C00405	Basic Starting Kit	11.99
C00885	Deluxe Starting Kit	21.99
C04050	Firebird™	41.99
C04060	E-Z Flyer® Aerobat™	41.99
C04070	E-Z Flyer® Cessna Skymaster	41.99
C04080	E-Z Flyer® Piper Comanche	41.99
C04100	Allen Hovercraft	57.99
C04300	Air Rescue™	46.99
C04420	Comanche Helicopter	57.99
C04500	Attack Cobra	57.99
C04506	Texaco .049	39.99
C04800	Sky Jumper®	57.99
C05300	R/C Recon™	99.99
C05820	Turbo Hawk™	49.99
C05840	Electric Powered Glider	29.99
C06010	E-Z Flyer® Formula One™	41.99
C06030	Blackdraft™	59.99
C06040	Slipstream™	59.99
C06050	Apache Helicopter	59.99
C07400	Cessna	6.99
C07410	Cessna Classic	11.99
C07420	Piper	6.99

Prod. No.	Description	Sugg. Retail
C07430	Piper Cruiser	11.99
C07440	Fun Flyer™ Heli	6.99
C09050	Flex Wing Flyer	89.99
C09501	F8F Bearcat™ w/o Battery & charger	49.99
C09561	F8F Bearcat™ w/Battery & charger	79.99
C09800	AT-6 Texan™	41.99
C09870	Piper J-3 Cub	59.99
C09880	Extra 300s	59.99
C09890	AT-6 Texan™ Bomb Drop	59.99
C90445	R/C Fly Boy™	199.99
C90450	Lazy Bee™ w/2 Ch. Radio - 27 MHz	289.99
C90469	R/C Sky Bird™ w/2 Ch. Radio - 27 MHz	357.99
C90476	R/C E-Z Bee® II w/Cobra 2 Ch. Radio - 72 MHz	329.99
C90478	R/C Sky Bird™ Glow w/2 Ch. Radio - 27 MHz	279.99
C90480	R/C E-Z Bee® Sport w/1 Ch. Radio - 27 MHz	251.99
LIGHT GLIDERS		
4000	Hi-Lite®	5.79
4001	Phantom™	6.89
4002	Mirage™	9.49
4003	Flight Master®	10.59
4004	Cyclone™	11.99
4005	Whirlwind™	5.79
4006	Firestorm™	9.99
WEST WINGS		
5000	C-130 Hercules	5.99
5001	F-16 Falcon	5.99
5004	Space Shuttle	5.99
5005	F-14 Tomcat	5.99
5006	Tomado	5.99
5007	F-18 Hornet	5.99
5008	F-111 Aardvark Catapult Glider	7.99
5009	F-15 Eagle Catapult Glider	7.99
5012	SR-71 Blackbird™	5.99
Star Wars		
1490	X-wing™ Fighter Starter Set	36.99
1493	Death Star™ Starter Set	36.99
1810	Mini X-wing™ RTF with Engine	8.99
1819	X-wing™ Fighter RTF Starter Set	36.99
1820	Vader's TIE Fighter™ RTF Starter Set	36.99
1821	Y-wing™ RTF Starter Set	36.99
1822	Mini X-wing™ - Red Squadron RTF Starter Set	36.99
1823	R2-D2™ RTF Starter Set	36.99
2102	Star Wars TIE Fighter™ Commemorative	24.39
2103	Star Wars X-wing™ Fighter Commemorative	18.99
2104	Star Wars R2-D2™ Commemorative	28.59
2142	R2-D2™ Model Rocket	16.99
2143	Death Star™ Model Rocket	16.99
2144	Vader's TIE Fighter™ Model Rocket	16.99
2147	Star Destroyer™ Model Rocket	29.99
2500	X-wing™ Fighter Air Powered Rocket Set	TBD
NCR3540	High Impulse™ X-wing™ Fighter	99.99
5020	Star Destroyer™ Catapult Glider	8.49
5021	A-wing Fighter™ Catapult Glider	8.49
5022	X-wing™ Fighter Glider	6.49
5023	Y-wing™ Fighter Glider	6.49
STE5780	X-wing™ Fighter Control Line	24.99
STE6761	Y-wing™ Fighter Control Line	24.99
C09310	X-wing™ Fighter Control Line	59.99
C09320	Snowspeeder™ Control Line	59.99
C09430	Landspeeder™ R/C	99.99

TM & © 1997 Lucasfilm Ltd. All Rights Reserved.  
Used under authorization.

RTF = Ready to Fly

TBD = To be determined

Prices are subject to change without notice.

© 1997 Centun Corp. All rights reserved.

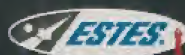
(12-97) 906352



Recommended for ages 10 years and up. Adult supervision for those under 12. Assembly, construction supplies, glue, launch equipment and flight supplies required — not included.

29





**MERCURY  
ATLAS™**

## Masters™ SERIES

**Level 4 (Masters™ Series)**  
These kits require a high degree of modeling involvement from building to painting to flying.



**GLIDING  
ORBITER**



**SPACE  
SHUTTLE™**

## r/c glider

### R/C Glider

- Rocket-powered, radio-controlled sailplane
- Launch or boost vertically, then gently guide it toward a thermal



**ROCKET-  
POWERED**

**OUTSTANDING  
SLOPE SOARER!**

### MASTER™ SERIES

#### MERCURY ATLAS™ EST 2111

A highly detailed 1/25 scale model of the vehicle that put the first American in orbit. Injection and vacuum formed plastic parts with simulated seamless steel body finish. Requires approved stabilizer fin for flight.

**SPECS:** Length: 35" (89 cm) Dia.: 3.4" (8.6 cm)  
Wt.: 7.8 oz (220 g) Recovery: Capsule - 12" (30 cm)  
Parachute: Main body - 24" (61 cm) Parachute: Fins: One cut tube, Max. Altitude: 250 ft (76 m)  
Recommended Engine: D12-3 only  
Recovery: 2/16 (16 mm) Mod™ launch rod (EST 802344) - available separately

#### SPACE SHUTTLE™ EST 1284

Accurately detailed in 1/102 scale of America's workhorse of the vehicle. Orbiter features glide return. External Tank and SRB's return via chute. Requires removable stabilizer fin for flight.

**SPECS:** Total Length: 13.6" (34.5 cm) Wt.: 4.4 oz (124 g)  
Orbiter Length: 8.0" (22.9 cm) Recovery: Orbiter: Glider  
SRB's/ET: 18" (46 cm) Parachute: Fins: One cut tube  
Max. Altitude: 197 ft (60 m)  
Recommended Engines: C5-3 (first flight), C6-5

### ESTES R/C GLIDER

#### SWEET VEE™ EST 2116

Launch the glider vertically, then guide it toward a thermal and watch it fly. This model features a dovetailed fuselage and pre-cut foam wing panels and Osprey wood balsa. Kit includes complete with a normal plastic wing panel. The Sweet Vee™ requires at least a two-channel radio with a receiver of this size form - R/C equipment NOT included. R/C training and flying experience required.

**SPECS:** Length: 24" (60.4 cm) Wingspan: 50" (127 cm)  
Wing Area: 240 sq. ft (22.2 sq. m) Wt.: 19.25 oz (544 g)  
Max. Altitude: 130 ft (40 m) Recommended Engine: D12-3 only

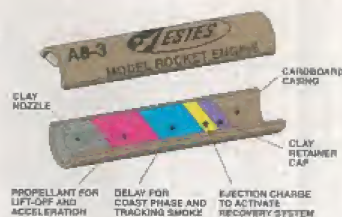
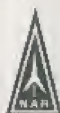
Recommended for ages 10 years and up. Adult supervision for those under 12.  
Assembly, construction supplies, glue, launch equipment and flight supplies required - not included.



## ESTES MODEL ROCKET ENGINES

These are the famous model rocket engines that made model rocketry the safe hobby it is today. They incorporate a safe, intelligent design, manufactured under precise and strict engineering tolerances. Estes model rocket engines have been proven consistent and reliable in more than 300,000,000 launches. They are the key to the outstanding safety record model rocketry has achieved over the past 40 years.

- The concept of a factory assembled model rocket engine is the foundation of this safe, scientific and educational activity!
- 3% of all Estes engines are static-tested at the factory for reliability and adherence to performance specs.
- All engines comply with the codes of the National Fire Protection Association and are certified by the National Association of Rocketry.



## HOW DOES A MODEL ROCKET ENGINE WORK?

1. Insert engine into rocket. Insert igniter and igniter plug into engine. Place rocket over launch rod on launch pad, hook igniter clips to igniter.  
U.S. Patent Nr. 5,509,354



2. When launch button is pushed, engine produces thrust and boosts rocket into the sky.



3. After propellant is used up, delay is activated, allowing rocket to coast.



4. After delay, ejection charge is activated, deploying recovery system.

## MAKE CERTAIN SAFETY KEY HAS BEEN REMOVED FROM CONTROLLER!



## WHAT SIZES ARE AVAILABLE?

Estes engines are available in a wide variety of sizes and power levels:

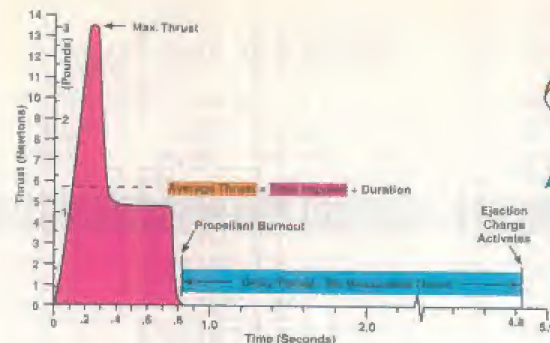
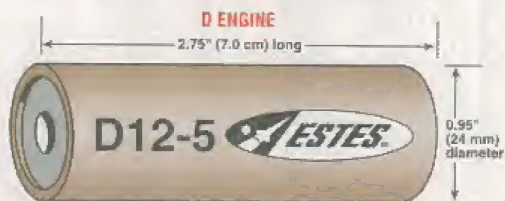
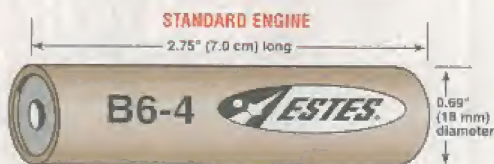
TYPE	TOTAL IMPULSE	ENGINE TYPES
1/2A	0.626 - 1.25	Standard, Mini
A	1.26 - 2.50	Standard, Mini
B	2.51 - 5.00	Standard
C	5.01 - 10.00	Standard
D	10.01 - 20.00	"D" Size

## WHAT DO THE DIFFERENT COLOR ENGINES MEAN?

Each type of engine is printed in a different color:

**Single Stage** engines are printed green.  
**Upper Stage** engines are printed purple.  
(Upper stage engines can be used as single stage engines in lightweight rockets.)  
**Booster** engines are printed red. (Booster engines contain no delay or ejection charge.)

**Plugged** engines are printed black. (They are used for R/C gliders and contain no delay or ejection charge.)



Each engine has a letter-number-number code (e.g. B6-4)  
Letter: B Number: 6 Number: 4

### TOTAL IMPULSE

Unit = Newton-seconds (N-sec)

This letter indicates the total power the engine produces. **Total Impulse** is measured in Newton-seconds. One Newton-second is the total impulse produced by one Newton of thrust for a duration of one second. A "B" engine (5 N-sec) can produce up to 5 newtons of thrust for 1 sec, 10 newtons for 1/2 sec or any combination that equals up to 5 N-sec. (1N = 0.225 lbs.)

### AVERAGE THRUST

Unit = Newton

This number tells you the **Average Thrust** of the engine during thrust phase. The actual thrust varies during engine burn. The propellant may burn quickly giving a higher average thrust or burn slowly for a lower average thrust. Generally, higher average thrust is best for heavier rockets, lower average thrust is usually more efficient for smaller, lighter rockets.

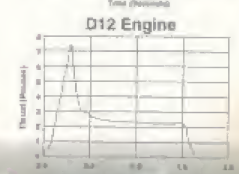
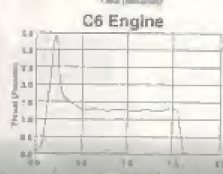
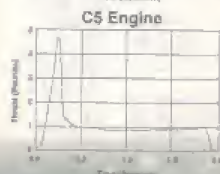
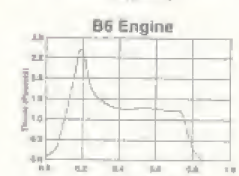
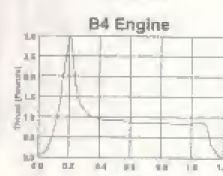
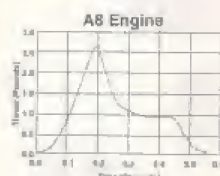
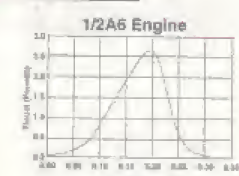
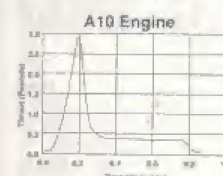
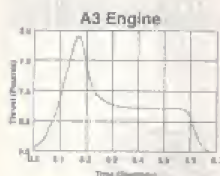
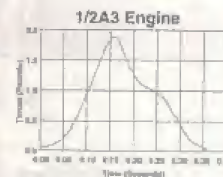
### TIME DELAY

Unit = seconds

This number is the number of seconds between the end of the thrust phase and the activation of the ejection charge. The delay allows the rocket to coast to its peak altitude before the recovery system is deployed.

### TIME/THRUST CURVES

- Time/thrust curves are representative of random production samples.
- Time/thrust curve graphs are shown in pounds (not Newtons).
- Graphs are not drawn to the same scale.



### ROCKET TIP

You should always use the Estes engine recommended for your specific kit.



THRUST PHASE — COAST PHASE

EJECTION



## ENGINE CHART

- Delays have a tolerance of plus or minus 10% or 1 second, whichever is greater.
- All Estes engines come complete with igniters and patented Igniter Plugs (Pat. No. 5,509,354). The Estes Igniter Plug makes engine ignition extremely reliable.
- Do not fly a rocket/engine combination whose maximum lift-off weight exceeds the recommended maximum lift-off weight.

Prod. No.	Engine Type	Total Impulse N-sec	Time Delay Sec.	Max. Lift Weight oz. gm	Max. Thrust Newtons Lbs.	Thrust Duration Sec.	Initial Weight oz. gm	Propellant Weight oz. gm
<b>SINGLE STAGE ENGINES (GREEN LABEL)</b>								
1503	1/2A3-2T	1.25	2	2.0	57	8.3	1.9	0.3
1593	1/2A6-2	1.25	2	2.0	57	11.8	2.7	0.3
1507	A3-4T	2.50	4	2.0	57	8.5	1.9	0.6
1511	A10-3T	2.50	3	3.0	85	13.0	2.9	0.8
1598	A8-3	2.50	3	3.0	85	11.8	2.7	0.5
1601	B4-2	5.00	2	4.0	113	13.2	3.0	1.1
1602	B4-4	5.00	4	3.5	99	13.2	3.0	1.1
1605	B6-2	5.00	2	4.5	127	12.1	2.7	0.8
1606	B6-4	5.00	4	4.0	113	12.1	2.7	0.8
1617	C5-3	10.00	3	8.0	226	21.0	4.7	1.9
1613	C6-3	10.00	3	4.0	113	15.3	3.4	1.6
1614	C6-5	10.00	5	4.0	113	15.3	3.4	1.6
1666	D12-3	20.00	3	14.0	396	32.9	7.4	1.6
1667	D12-5	20.00	5	10.0	283	32.9	7.4	1.6
<b>UPPER STAGE ENGINES (PURPLE LABEL)</b>								
1504	1/2A3-4T	1.25	4	1.0	28	8.3	1.9	0.3
1607	B6-6	5.00	6	2.5	71	12.1	2.7	0.8
1615	C6-7	10.00	7	2.5	71	15.3	3.4	1.6
1668	D12-7	20.00	7	8.0	226	32.9	7.4	1.6
<b>BOOSTER STAGE ENGINES (RED LABEL)</b>								
1510	A10-0T	2.50	None	5.0	142	13.0	2.9	0.8
1608	B6-0	5.00	None	4.0	113	12.1	2.7	0.8
1616	C6-0	10.00	None	4.0	113	15.3	3.4	1.6
1665	D12-0	20.00	None	14.0	396	32.9	7.4	1.6
<b>PLUGGED ENGINES - FOR USE WITH R/C ROCKET GLIDER (BLACK LABEL)</b>								
1669	D11-P	20.00	None	16.0	453	27.6	6.2	1.8

The data listed above is from randomly chosen production samples.

NOTE: The "T" designates a mini-engine.

## FLIGHT ACCESSORIES

### BLAST-OFF® FLIGHT PACK

EST 1672

Contains 24 engines, 24 igniter plugs, 30 igniters and a pack of recovery wadding. Engines include six each of the A8-3, B6-4, C6-3 and C6-5. Ideal way to have fun on a Saturday afternoon!

### RECOVERY WADDING

EST 302274

Flame resistant wadding to protect your recovery system. Required in most Estes rockets. Contains 75 sheets - enough for about 18-25 flights!

### IGNITERS

EST 302301

Dependable, easy-to-use Estes igniters in a convenient six pack. It is always a good idea to have a few spares



BLAST-OFF®  
FLIGHT PACK

RECOVERY  
WADDING

IGNITERS



ELECTRON BEAM®  
LAUNCH CONTROLLER

PORTA-PAD® II  
LAUNCH PAD

ROCKET TIP

You must use a launch pad and a launch controller to fly your model rockets. On this page, you will find all the equipment you need to fly your rockets safely.



ROCKET  
BUILDER'S  
MARKING  
GUIDE™

FIN ALIGNMENT GUIDE™



DESIGNER'S  
SPECIAL™



ALTITRAK™

TRANSROC II™  
ROCKET LOCATOR

## LAUNCH ACCESSORIES

### ELECTRON BEAM® LAUNCH CONTROLLER EST 302220

Launch controller comes complete with safety key, continuity light, push button launch button, safety decals, 17 feet (5.2 m) of cable and micro-clips for igniter hook up. No assembly required! Requires four AA alkaline batteries - not included.

### PORTA-PAD® II LAUNCH PAD EST 302215

Sturdy, bright plastic tripod design with tilt adjustment (up to 30° from vertical). Easy to set up and take down - no tools required! Comes complete with blast deflector and standoff, two-piece 1/8" (3 mm) launch rod, safety cap and key. Porta-Pad® II can accommodate a 3/16" (5 mm) launch rod - not included.

### ELECTRON BEAM®/PORTA-PAD® II COMBO EST 302218

Contains a complete Electron Beam® and Porta-Pad® II launch pad system. Requires four AA alkaline batteries - not included.

### 1/8" (3 MM) TWO-PIECE LAUNCH ROD EST 302243

Replacement rod; ideal for most rockets.

### 3/16" (5 MM) TWO-PIECE MAXI™ LAUNCH ROD

EST 302244

Launch rod with extra strength and stiffness for larger rockets.

### LAUNCH ROD SAFETY CAP AND KEY EST 302205

Always keep an extra one handy!

### BLAST DEFLECTOR WITH STANDOFF EST 302241

Replaces that worn-out deflector.

### ROCKET BUILDER'S MARKING GUIDE™ EST 302227

Easy way to mark fin and launch lug placement lines. Fits all current Estes body tubes. Marks fins at 90° and 120° apart. The angled ruler measures metric and inches. A pencil holder to mark tube circumferences and a fin gluing jig are also included. Molded out of durable plastic. A must for any rocket builder!

### FIN ALIGNMENT GUIDE™ EST 302231

Allows you to position and glue 3/32" (2 mm) and 1/8" (3 mm) thick fins quickly and easily. Designed to fit all current Estes body tubes, aligning fins at 90° and 120°. Molded out of durable plastic.

### DESIGNER'S SPECIAL™ EST 1463

Design and build your own rockets! Contains nose cones and body tubes for BT-5, BT-20, BT-50, BT-55 and BT-60 designs. Also contains parachute and streamer kits, engine mounts, launch lugs, fin stock, tube couplers, centering rings and much more!

### ALTITRAK™ EST 302232

How high did it really go? Next time, measure it with this easy to use device. Follow the rocket in the sights to apogee, release the trigger to lock the reading. Easy-to-read display gives you your altitude in meters along with the elevation angle. Use two Altitraks™ for greater accuracy. Great for school and science projects!

### TRANSROC II™ ROCKET LOCATOR EST 2237

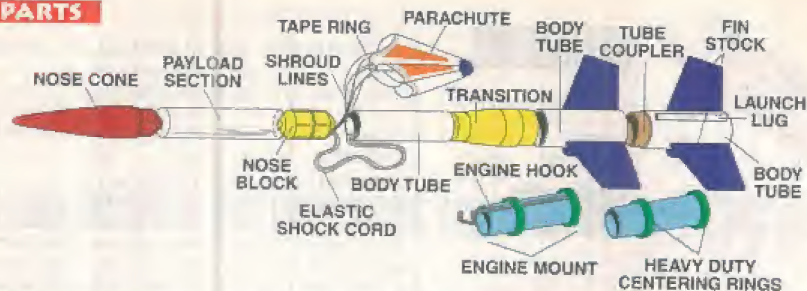
On-board sonic unit fits any BT-20 (3/4" or 18 mm) or larger body tube. Unit emits high pitched tone to aid in recovery. Use the directional locating device with the included headphones to make finding your rocket easier. Requires one 9 volt battery and one 6 volt (type 2CR1/3N) battery - not included.

### EMERGENCY REPAIR KIT EST 302233

Contains many things you need on the launch pad or to make field repairs on your rockets. Comes in a handy reclosable pouch. Contains: shock cord mounts, tape rings, safety key, recovery wadding, 12' (30 cm) parachute kit, shroud line, launch lugs, shock cords and launch rod safety cap



## PARTS



Model rocket kits are constructed of lightweight materials such as paper, balsa and plastic. The diagram above shows how parts fit together. Nearly all Estes parts that have the same series description number fit together. For instance, a BT-20 body tube will fit a NC-20 nose cone. An AR2050 centering ring will center a BT-20 into a BT-50.

### BODY TUBES

High quality spiral wound paper tubes. Use tube couplers to connect tubes of the same diameter.

Four tubes per package with BT-5 & BT-20, three per package with BT-50, BT-55, BT-60 & HBT-1090, two per package in BT-80.

Product Number	Body Tube Size	Inside Dimension in./mm	Outside Dimension in./mm	Length in./cm
303084	BT-5	0.518/13.2	0.544/13.8	18.0/45.7
303085	BT-20	0.710/18.0	0.736/18.7	18.0/45.7
303086	BT-50	0.950/24.1	0.976/24.8	18.0/45.7
303087	BT-55	1.283/32.6	1.325/33.7	18.0/45.7
303088	BT-56	1.304/33.1	1.346/34.2	18.0/45.7
303089	BT-60	1.595/40.5	1.637/41.6	18.0/45.7
303090	BT-80	2.588/65.7	2.600/66.0	14.2/36.1
303091	HBT-1090	0.950/24.1	1.000/25.4	11.0/27.9

### NOSE CONE ASSORTMENTS

Each package of nose cones contains a variety of shapes. Some are one piece, others two-piece. All have eyelets for shock cord and shroud line attachments.

#### NC-5 Nose Cone Assortment EST 303160

Five cones per pack

#### NC-20 Nose Cone Assortment EST 303161

Five cones per pack

#### NC-50 Nose Cone Assortment EST 303162

Five cones per pack

#### NC-55 Nose Cone Assortment EST 303163

Four cones per pack

#### NC-56 Nose Cone Assortment EST 303164

Four cones per pack. Same cone shape, different colors.

#### NC-60A Nose Cone Assortment EST 303165

Two cones per pack Big Bertha™ and Bailout™ style.

#### NC-60B Nose Cone Assortment EST 303166

Two cones per pack Mean Machine™ and Tomcat™ (without canopy) style

#### NC-80A Nose Cone EST 303167

One cone per pack Phoenix™ style

#### NC-80B Nose Cone EST 303168

One cone per pack Fat Boy™ style

#### NC-1090 Nose Cone EST 303169

Four cones per pack Bandit™ and Fire Streak™ style

### SMALL TUBE COUPLERS EST 302297

Two couplers each for BT-5, BT-20 and BT-50.

### PAYLOAD SECTION KITS

**Payload Section PS-20 & PS-50/55 - EST 303194**  
Complete with two clear payload sections (BT-20 and BT-50 size). Fits BT-20 and BT-50-sized rockets - 0.74" (18.7 mm) and 0.98" (24.8 mm) diameters plus Includes a transition section to fit the BT-50 sized clear tube onto a BT-55 (1.33" or 33.7 mm) body tube. Kit includes plastic bulkheads and instructions. Nose cones not included!

#### Payload Section PS-55/60 - EST 303195

Large BT-60 (1.6" or 40 mm) clear tube to fit BT-55 and BT-60 size rockets. Complete with bulkheads, transitions and nose cone.

### LARGE TUBE COUPLERS EST 303196

Two couplers for BT-55, BT-56 and BT-60; One for BT-80.



**ROCKET TIP**

Convert your favorite rockets over to carry payloads! Just look for your rocket's diameter in the rocket specs in this catalog. Select the payload section that fits.



### DOWELS, FIN STOCK & PATTERNS PACK EST 303193

Includes three different sheets of balsa:

- 3" X 12" X 3/32" (75 mm X 305 mm X 2 mm)
- 3" X 12" X 1/8" (75 mm X 305 mm X 3 mm)
- 3" X 12" X 3/16" (75 mm X 305 mm X 3.5 mm);

and two different dowel stock:

- 1/12" X 12" (2 mm X 305 mm)
- 1/8" X 12" (3 mm X 305 mm);

and includes pattern sheets containing many popular fin shapes

### CENTERING RING PACK EST 302295

Heavy duty centering rings for centering tubes in other tubes or for making custom engine mounts. Includes rings that center BT-5 in BT-20 (six each), BT-20 in BT-50 (12 each) and BT-50 in BT-55 (six each).

### FLAT CENTERING RING PACK EST 302295

Die-cut card stock rings for centering tubes in other tubes or for making custom engine mounts. Includes instructions and pattern sheet to make paper shrouds for transitions and boat tails. Rings will center BT-20 in BT-50, 55, 56 and 60 and BT-50 centered in BT-60 and BT-80.

### ENGINE HOOK PACK EST 303143

Hooks for engine mounts - Fits mini-engines (one each), regular and "D" engines (three each) and 3-1/2" long hooks for special applications (two each). Includes spacer for long engine hooks.

### LAUNCH LUG PACK EST 303230

Contains eight 1/8" (3 mm), four 3/16" (5 mm) and two 1/4" (6 mm) launch lugs.

### DECALS

Apply these boldly colored decals anywhere - on rockets, model cars, airplanes, notebooks, etc.

**Assortment 1 EST 302995** - Water transferable decals with US Flags, military "Stars and Bars", letters and numbers plus more!

**Assortment 2 EST 302996** - Self-adhesive chrome foil decals with hatches, cockpits and more!

### PLASTIC PARACHUTES

Colorful chutes complete with tape rings, shroud lines, snap swivels (for quick changes) and instructions.

Product No.	Parachute Diameter
EST 302264	12" (30 cm)
EST 302267	18" (46 cm)
EST 302271	24" (61 cm)

### NYLON PARACHUTES

Red, ripstop nylon chutes, pre-assembled. Fits rockets with a BT-60 (1.6" or 42 mm) or greater body tube.

Product No.	Parachute Diameter
EST 302260	18" (46 cm)
EST 302261	24" (61 cm)

### STREAMER KITS EST 302275

Contains two different types of streamer material. One 2" X 90" (5 cm X 230 cm) red crepe paper and two 1.75" X 36" (4.5 cm X 91 cm) metallized plastic streamers (One gold, one red). Comes complete with snap swivels.

### SHOCK CORDS AND MOUNT PACK EST 302278

Contains two 1/8" X 18" (3 X 450 mm), and one 1/4" X 36" (6 mm X 910 mm) elastic shock cords (enough for four shock cords). Includes mounts and instructions.

### ENGINE MOUNT KITS

Engine mounts for conversions and original designs. Easy to assemble with complete instructions. Each kit has enough parts for two complete mounts.

#### MINI-ENGINE MOUNT - EST 303157

Fits BT-20 tubes. Also can be used to fly lightweight standard engine kits with mini-engines.

#### STANDARD ENGINE MOUNT - EST 303158

Fits BT-50, 55, 56 & 60 tubes. Plus can be used to make a conversion mount for lightweight D powered rockets.

#### D ENGINE MOUNT KIT - EST 303159

Heavy duty engine mounts for D engines. Fits BT-55, 60 and 80 tubes.





## MODEL ROCKETRY AND EDUCATION

FOR MORE DETAILS AND INFORMATION ON OUR MODEL ROCKET EDUCATIONAL SUPPLIES, SEE THE ESTES EDUCATOR™ CATALOG.

### MODEL ROCKET BULK PACKS

12 rockets per pack, complete with 12 sets of instructions and extra parts.

#### ALMOST READY TO FLY (E2X® SERIES)

Gnome™ Bulk Pack (See page 18 for rocket description) . . . . . EST 1750

Alpha III® Bulk Pack (See page 18 for rocket description) . . . . . EST 1751

Bandit™ Bulk Pack (See page 16 for rocket description) . . . . . EST 1752

Generic E2X® Bulk Pack (pictured at right) . . . . . EST 1764

X-Ray™ Bulk Pack (See page 21 for rocket description) . . . . . EST 1768

Mach-12™ Bulk Pack (See page 20 for rocket description) . . . . . EST 1769

Omlord™ Bulk Pack (See page 20 for rocket description) . . . . . EST 1771

#### SKILL LEVEL 1 (BETA™ SERIES)

Wizard™ Bulk Pack (See page 26 for rocket description) . . . . . EST 1754

Viking™ Bulk Pack (See page 30 for rocket description) . . . . . EST 1755

Alpha® Bulk Pack (See page 27 for rocket description) . . . . . EST 1756

Nova Payloader™ Bulk Pack (See page 27 for rocket description) . . . . . EST 1757

Performance™ Bulk Pack (pictured at right) . . . . . EST 1765

Venom™ Bulk Pack (See page 28 for rocket description) . . . . . EST 1770

#### SKILL LEVEL 2 (EXPLORER™ SERIES)

Tornado™ Bulk Pack (See page 36 for rocket description) . . . . . EST 1750

Loadstar™ Bulk Pack (pictured at right) . . . . . EST 1760

Bull Pup 12D™ Bulk Pack (See page 36 for rocket description) . . . . . EST 1767

#### PROPELLER DRIVEN AIRPLANE

Hi-Lite® Light Glider Bulk Pack (See page 65 for description) . . . . . EST 1786

#### ANOTHER EXCITING NEW KIT

Star Wars X-wing Fighter™ Bulk Pack (6 pack) (See page 70 for rocket description) . . . . . EST 1773

### MODEL ROCKET ENGINE BULK PACKS

Includes 24 engines and igniter plugs, 30 igniters and a package of recovery wadding (enough for 25 flights).

1/2A3-2T Bulk Pack . . . . . EST 1780

A8-3 Bulk Pack . . . . . EST 1781

B6-4 Bulk Pack . . . . . EST 1783

B6-0/B6-6 Bulk Pack (12 each) . . . . . EST 1784

C5-3 Bulk Pack . . . . . EST 1785

(See pages 42-44 for additional engine information)

ESTES  
EDUCATOR™

GENERIC E2X®



PERFORMANCE™

ECONOMICAL  
FOR LARGE  
GROUPS

NEW!

NEW!



LOADSTAR™

## SOFTWARE

Learn about the principles of aerodynamics, physics and space flight with these programs. Provided on a 5.25" floppy disk for Apple computers and a 3.5" floppy disk for Mac and IBM compatible computers.

### IN SEARCH OF SPACE - INTRODUCTION TO MODEL ROCKETRY™

Covers: flight profile; parts; engine and classification; safety code plus bonus program on multi-staging and igniter installation and function.

Apple . . . . . EST 9025

Mac . . . . . EST 9041

IBM Compatible/Windows . . . . . EST 9038

### FLIGHT: AERODYNAMICS OF MODEL ROCKETS™

Covers: forces; aerodynamics; stability; drag; center of gravity; center of pressure.

Apple . . . . . EST 9026

Mac . . . . . EST 9042

IBM Compatible/Windows . . . . . EST 9039

### PHYSICS OF MODEL ROCKETRY™

Covers: action; reaction; inertia; momentum; acceleration; energy; staging and satellites.

Apple . . . . . EST 9027

Mac . . . . . EST 9043

IBM Compatible/Windows . . . . . EST 9036

### ASTROCAD™

Computer program for basic model rocket performance analysis such as: Apogee Determination, Drag and Performance Prediction, Flight Simulation, Rocket Design, Aerodynamic Stability, Optimum Weight and Elliptical fin design. Written by Michael Gasperi

Apple . . . . . EST 9028

Mac . . . . . EST 9040

IBM Compatible/Windows . . . . . EST 9037



## ESTES TEACHER'S

### STARTER SET

EST 1456

Contains a Generic E2X® rocket (Almost-Ready-To-Fly) and an Alpha® rocket (Skill Level 1).

Plus:

- Electron Beam® Launch Controller
- Porta-Pad® II Launch Pad
- Glue, sandpaper and razor blade
- Engines, recovery wadding, igniters and plugs - enough for six launches
- Teacher and Youth Group Leaders Guide, science and math applications plus more!



NEW!

## VIDEO

Ignite the Imagination™ . . . . . EST 2794

• Great for Estes model rocketry and space studies.

• Accompanies the Ignite the Imagination™ Curriculum Guide.

## CURRICULA

Science and Model Rocketry™ . . . . . EST 2847  
(For grades 5-8)

Physics and Model Rockets™ . . . . . EST 2848  
(For grades 8-10)

Mathematics and Model Rockets™ . . . . . EST 2849  
(For grades 5-12)

Industrial Technology and Model Rockets™ . . . . . EST 2850  
(For grades 6-12)

Aviation And Light Gliders™ . . . . . EST 2851  
(For Grades 2-4 and up) - Use with Estes Light Gliders.

NEW! Ignite the Imagination™ . . . . . EST 2852  
(For Grades 5-8)

NEW! X-wing™ Fighter Lesson Guide™ . . . . . EST 2853  
(For Grades 5-8)







**fun  
flyer™**

## RUBBER POWERED MODEL AIRPLANE KITS

- Easy to assemble...No Glue  
No Tools...No Sweat!
- Tough durable construction
- Foam fuselages and wings
- Plastic propeller and landing gear
- Cox's self-adhesive decals



**CESSNA**



**PIPER**



**CESSNA CLASSIC**



**FUN FLYER™ HELI**



**PIPER CRUISER**

**CESSNA** C07400  
Wingspan: 15" (38.1 cm)

**PIPER** C07420  
Wingspan: 15" (38.1 cm)

**CESSNA CLASSIC** C07410  
Wingspan: 19" (48.3 cm)

**PIPER CRUISER** C07430  
Wingspan: 19" (48.3 cm)

**FUN FLYER™ HELI** C07440  
This exciting rubber band powered helicopter is easy to assemble! Made from durable foam and plastic construction, you can be flying your "whirlybird" in less than 30 minutes.

**SPECS:** Skill level: Beginner; Length: 10" (25.4 cm); Rotorspan: 15.25" (38.7 cm)



For over 50 years, Cox has filled the air with the sound of propellers and the fantasy of flight. Cox brings that fantasy-of-flight to life with nitro powered glow engines, the whirl of electric power and the gentle pull of rubber power!



**COX POWER**



**COX FLIGHT**



**COX FUN.**

*When the action starts...  
The fun never ends!*



## CONTROL LINE AIRPLANES - ELECTRIC POWERED THE ULTIMATE IN READY TO FLY

These Cox control line airplanes are ready to fly right out of the box. Just connect the power lines, plug in a fully-charged Cox Super Power 9.6 volt battery pack and push the button on the Cox exclusive Touch & Go D-handle. Smooth take-offs and three point landings are as easy as pushing a button. With the Super Power battery pack clipped to your belt, long flight times are no problem.

- Each plane comes fully assembled and ready to fly out of the box
  - Quiet electric power will not disturb the neighborhood
  - Factory-installed motor assembly
  - Just supply battery and charger and you're ready to fly!
- (Super Power 9.6V battery pack and charger not included.)

**F8F BEARCAT** C09501

Wingspan: 19" (48.3 cm)  
Length: 14.8" (37.6 cm)

**F8F BEARCAT W/BATTERY  
AND CHARGER . . . C09561**



**TOUCH & GO D-HANDLE**



Recommended for ages 8 and up.



EACH KIT COMES  
WITH TWO SETS OF  
COLORFUL DECALS!

### CESSNA SKYMASTER



### FORMULA ONE™



### PIPER COMANCHE



### E-Z FLYERS™

With the E-Z Flyer's fast engine and the propeller spinning through the air, you can soar throughout the sky with these high performance control line airplanes.

- Each one is equipped with our famous, 100-watt engine with 2000 RPM.
- Durable hard bakelite and tough motor; polystyrene withstands the rigors of flight training.
- Quick to assemble and easy to fly!
- Complete assembly and flight instruction.
- Glow fuel and blaring battery not included. You will need the Cox #85 or #85 Starting Kit, see page 60.

E-Z Flyers is a registered Cox trademark.

### CESSNA SKYMASTER C04070

Scale model of famous civilian and military aircraft includes multiple decals and a second propeller for advanced flight performance.

Length: 13" (33 cm)

Wingspan: 15.9" (40.4 cm)

### FORMULA ONE™ C06010

Sleek pylon racer design complete with multiple decals and a streamer for custom flying.

Length: 13.5" (34.3 cm)

Wingspan: 13.5" (34.3 cm)

### PIPER COMANCHE C04080

Own this model of a popular low-wing private airplane! Multiple decals for custom decorating!

Length: 13" (33 cm)

Wingspan: 16.1" (40.9 cm)

### FIREBIRD™



### FIREBIRD™ C04050

With the Reno Unlimited racing look of this control line plane, you'll come on strong!

Length: 13.5" (34.3 cm)

Wingspan: 13.5" (34.3 cm)

### AEROBAT™ C04060

Own your own private plane - classic high wing design.

Length: 12.5" (31.8 cm)

Wingspan: 16.0" (40.6 cm)

### AEROBAT™





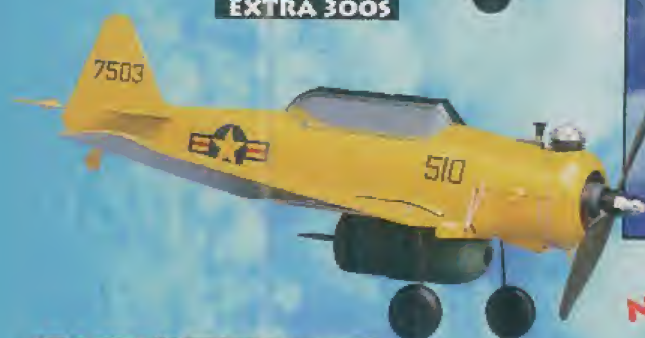
## CONTROL LINE SCALE MODELS

History comes to life with these rugged control line model airplanes. Powered by a Cox .049 glow engine with our exclusive Snap Starter®, you'll get into the air quickly. Engine and control line accessories included.



**NEW!**

**EXTRA 300S**



**AT-6 TEXAN BOMB DROP**

## SURE START™

The future of flight - NOW!

The next generation of powerful Cox .049 glow engines feature Sure Start™. It eliminates the need for external priming, giving you a quicker, easier starting engine. Each Sure Start™ engine comes complete with the Cox Snap Starter®.



**NEW!**



**PIPER J-3 CUB**



**AT-6 TEXAN**

**SLIPSTREAM™**



**BACKDRAFT™**



**APACHE HELICOPTER**

## CONTROL LINE SCALE MODELS

### EXTRA 300S C09800

This is a replica of the world class, FAI Aerobatic Extra 300s. This spectacular model is reproduced in semi-scale detail and features Cox's exclusive Sure Start™ .049 engine and complete flying accessories.

**SPECS:** Skill level: Beginner; Length: 17" (43.2 cm); Wingspan: 19.5" (49.5 cm)

### PIPER J-3 CUB C09870

One of the most successful full size training planes ever designed is now available in a highly detailed flying model. The Cub features the super reliable Sure Start™ .049 engine. Easy to assemble and fun to fly.

**SPECS:** Skill level: Beginner; Length: 17" (43.2 cm); Wingspan: 22" (55.9 cm)

### AT-6 TEXAN BOMB DROP C09890

You can experience the thrill of flying precision targeting missions and make hits on targets from heights of 20 feet, all from the confines of your own backyard. The bombing Texan comes complete with flying accessories and bomb attachment with safe, featherweight balls.

**SPECS:** Skill level: Beginner; Length: 15" (38.1 cm); Wingspan: 20.5" (52.1 cm)

### AT-6 TEXAN C09800

Modeled after the famous AT-6 Reno pylon racers. Wonderful beginner's airplane. Rubber band pop-apart assembly for the rigors of flight training and racing.

**SPECS:** Skill level: Beginner; Length: 15" (38.1 cm); Wingspan: 20.5" (52.1 cm)

### SLIPSTREAM™ C06040

This business jet has you piloting the skies in style. Rugged looking - great flying! Wide wingspan provides a stable flight for beginners and intermediate fliers! Outfitted with the new Cox Sure Start™ .049 engine.

**SPECS:** Skill level: Beginner; Length: 20.5" (52.1 cm); Wingspan: 22" (55.9 cm)

### BACKDRAFT™ C06030

Futuristic pusher design with a stealthy appearance. Unique pop-up fuselage allows safe engine starting. Backdraft™ comes complete with military decals for an authentic look. Powered by the new Cox Sure Start™ .049 engine.

**SPECS:** Skill level: Beginner; Length: 16" (40.6 cm); Wingspan: 18" (45.7 cm)

### APACHE HELICOPTER C06050

Be a chopper jock with the world's only control-line autogyro helicopter. Highly detailed scale-like design. Exciting flights for beginner to advanced pilots. Rigged with the Cox Sure Start™ .049 engine.

**SPECS:** Skill level: Beginner; Length: 18.5" (47.0 cm); Rotor Span: 15" (38.1 cm)

All kits require a Cox 405 or 885 Starting Kit - sold separately.





## FREE FLIGHT HELICOPTERS

Powered by the quick starting .049 engine, these free flight helicopters climb to 200 ft (60 m) in the air. After the fuel is expended, the choppers descend safely to earth by auto-rotation. Each kit is easily assembled and comes complete with fuel-proof decals. The .049 engine comes with the Cox Snap Starter® for easy starting.



**COMANCHE**



**AIR RESCUE™**



**ATTACK COBRA™**



**SKY JUMPER®**



Sky Jumper is a registered trademark of Cox.

### COMANCHE C04420

The Comanche is the latest in advanced helicopter technology from Boeing & Sikorsky and our model is authentic in every detail. Featuring the Sure Start™ .049 engine. Some assembly required.

**SPECS:** Skill level: Beginner; Length: 15" (38.1 cm); Rotorspan: 19.5" (49.5 cm)

### AIR RESCUE™ C04300

This scale model of the Huey UH-1D comes to your rescue in a bright "Search and Rescue" scheme.

**SPECS:** Skill level: Beginner; Length: 12" (30.5 cm); Rotorspan: 19.5" (49.5 cm)

### ATTACK COBRA™ C04500

Go on the attack with this scale model of the Cobra gunship. Comes with two decor schemes - Marines or Army.

**SPECS:** Skill level: Beginner; Length: 15" (38.1 cm); Rotorspan: 19.5" (49.5 cm)

### SKY JUMPER® C04800

Scale model of the Huey UH-1D in a US Marine decor. When the fuel runs out, the Sky Jumper® ejects and parachutes back to earth (figure and parachute included). The copter safely auto-rotates back to Earth.

**SPECS:** Skill level: Beginner; Length: 12" (30.5 cm); Rotorspan: 19.5" (49.5 cm)

### TOP SECRET C04100

Watch as your own alien aircraft slowly rises from your hands, then sweeps across the sky in random fashion until it runs out of fuel and auto-rotates back to the ground.

**SPECS:** Skill level: Beginner; Body Diameter: 14.3" (36.3 cm); Rotorspan: 19.5" (49.5 cm)

All kits require a Cox 405 or 885 Starting Kit - sold separately.

COMING  
THIS  
SPRING

NEW!



TOP SECRET





## COX RADIO CONTROL

For exciting radio control action, Cox offers the most complete line of electric powered model airplanes. All Cox electric powered model airplanes are designed for easy assembly and are ready to fly out of the box. They are also easy to maintain and repair. They are also easy to fly. They are also easy to store. They are also easy to transport. They are also easy to use. They are also easy to love.



**FLEX WING FLYER™**



**FLY BOY™**

## FREE FLIGHT

Often regarded as the purest form of the sport of model aviation, free flight has long offered the greatest challenge to modelers. With minimal assembly required, you can be out in the field flying in a matter of minutes. It's just that easy. Simply set on the field and let the plane do the work.

**COMING  
THIS  
SPRING**



**TURBO HAWK™**

## ELECTRIC R/C

Your easiest entry into R/C flight. You can fly these electric powered airplanes almost any time or anywhere. All kits come complete with an installed motor and battery equipment, on-board battery charger, and a fully installed radio system. They are also easy to maintain and repair. They are also easy to fly. They are also easy to store. They are also easy to transport. They are also easy to use. They are also easy to love.



**R/C SKY BIRD™ELECTRIC**

## FLEX WING FLYER™ C89050

A truly economical way to get into R/C flying. Kit comes complete with die cut foam parts, two battery, motor, and radio equipment included.  
Wingspan: 28" (71.1 cm)  
Length: 14" (35.6 cm)

## FLY BOY™ C80445

Minimum assembly requirements and a powerfully geared electric motor that starts at the touch of a button make the economical Fly Boy™ a natural entry into R/C flying. Includes a fully installed motor drive and Cox FlySafe™ radio system.  
Wingspan: 37" (94.0 cm)  
Length: 20" (50.8 cm)

## R/C SKY BIRD™ ELECTRIC C80469

Designed as the ideal trainer for people who prefer quiet, clean electric power, the Electric Sky Bird™ comes complete with high efficiency geared propeller drive system, rechargeable on-board battery pack, battery charger, and proportional two-stick, two-channel radio. The Sky Bird™ features a polyhedral wing to allow slow flight and good stability.  
Wingspan: 42" (106.7 cm)  
Length: 31" (78.7 cm)

## TURBO HAWK™ C85820

Experience the sight and sound of a true jet-type aircraft. Model comes complete with motor, digital fuel valve and Ni-Cad battery pack as well as included battery charger.  
Wingspan: 27" (68.6 cm)  
Length: 22.5" (57.2 cm)

## TOP SECRET™ C85840

The easiest way ever to get airborne. Simply pop on the air assembly, charge the Ni-Cad, and gently release into the breeze.  
Wingspan: 20.5" (52.1 cm)  
Length: 13.1" (33.3 cm)



**TOP SECRET™**

Recommended for ages 10 and up.





**R/C E-Z BEE® II**

## GLOW POWER R/C

Enjoy extended flight times and the sound of power as you expand your R/C horizon. All kits feature the powerful Cox .049 engine and a complete radio system.

### **R/C E-Z BEE® II** C90476

Rearex and abate as the E-Z Bee Sport get re-equipped with two channel radio system. The ideal trainer for you waiting to get into serious R/C flying!  
Wingspan: 55" (139.7 cm)  
Length: 31" (78.7 cm)

### **LAZY BEE™** C90450

Unique looking plane sure to be noticed on any flying field! A great trainer. Large control surfaces for quick response and can be flown in a level trim. Cox .049 equipped with a long duration fuel tank. Two channel two stick fully proportional caterpillar radio system is included. Plane is easy to assemble. Made of tough yet lightweight foam.  
Wingspan: 59" (99.1 cm)  
Length: 32.75" (83.2 cm)

### **R/C E-Z BEE® SPORT** C90480

Features the FailSafe™ Basic Control System and the powerful Snap Start™ equipped .049 Cox Glow Bee™ engine. Plastic aerodynamics a durable support for landing gear and engine. Tough polyfoam wings, fuselage and tail keep these planes light for long duration flights!  
Wingspan: 55" (139.7 cm)  
Length: 31" (78.7 cm)

**LAZY BEE™**

### **R/C SKY BIRD™ GLOW** C90478

R/C Sky Bird™ comes with two channel two stick fully proportional equipped radio system. Shorter wingspan for increased wind penetration. Comes with the powerful Cox Glow Bee™ .049 engine. Easy to assemble in less than hour.  
Wingspan: 42" (106.7 cm)  
Length: 31" (78.7 cm)

**R/C E-Z BEE® SPORT**

**R/C SKY BIRD™ GLOW POWER**







## JOIN THE ESTES A R FORCE'S LIGHT GLIDER SQUADRON

Light Gliders come in two varieties:

- Rubber powered aircraft consisting of plastic propellers and pre-built plastic landing gear
- The full featured wings and tail surfaces
- No tools, no glue and no cutting - easy and quick to build



**FIRESTORM™**

**NEW!**



**WHIRLWIND™**



**PHANTOM™**



**CYCLONE™**



**MIRAGE™**



**FLIGHT MASTER®**

## Light Gliders

**Estes**

### **FIRESTORM™** EST 4006

The unique rear rubber band powered propeller gives this airplane a distinctive look. Large 11" wingspan provides excellent gliding power. Glossy black finishing pieces and self adhesive decals. Easy to assemble and fly.

Wingspan: 12" (40.6 cm) Length: 20" (50.8 cm)

### **HI-LITE®** EST 4000

Brightly colored printed foam wings and tail surfaces will fly you flying fast. Easy to assemble and fly with plastic joining pieces. No tools, no glue and no cutting.

Wingspan: 13" (33 cm) Length: 10.8" (27.1 cm)

### **WHIRLWIND™** EST 4005

You'll love this terrific flying rubber powered airplane with 15 inch cambered wing span. Self adhesive decals and plastic connecting pieces. No tools, cutting or glue - quick and easy!

Wingspan: 15" (38.1 cm) Length: 10.4" (26.4 cm)

### **CYCLONE™** EST 4004

No trouble getting this giant 21 inch wing span glider into the air. Features cambered foam wings, stab and tail surfaces. Bright neon green plastic pieces and self adhesive decals. Great flying airplane!

Wingspan: 21" (53.3 cm) Length: 25" (63.5 cm)

### **PHANTOM™** EST 4001

Pull this fantastic flier into the air like a kite, release the tow and the glider floats back to earth. Can also be hand launched.

Wingspan: 23.5" (59.7 cm)

### **MIRAGE™** EST 4002

Wind the prop on this plane, toss it into the air and watch it fly! Rubber powered featuring plastic propeller and landing gear.

Wingspan: 19.5" (49.5 cm)

### **FLIGHT MASTER®** EST 4003

Huge 23.5 inch wingspan gives you a super duration flyer! Rubber powered featuring plastic propeller and landing gear.

Wingspan: 23.5" (59.7 cm) Length: 21" (53.3 cm)

Or,

- Long duration fliers with pre-shaped bamboo wings, stabilizers and rudder
- Features plastic ribs and connecting pieces
- Glossy, printed foam surfaces and pre-cut plastic pieces to cover flying surfaces
- Requires a glue stick and minimal cutting
- Simple to build. Glue and tools not included.



## FLY YOUR WINGS IN THE ESTES AIR FORCE WITH WEST WINGS!

- Easy to build, perfect model airplane kit
- One set, many great ideas
- Printed with cardboard, balsa and mylar bags
- Add your own motor and battery
- Great flying gliders
- Collectible numbered planes come complete with plastic names and easy July 4th launch band



**NEW!**



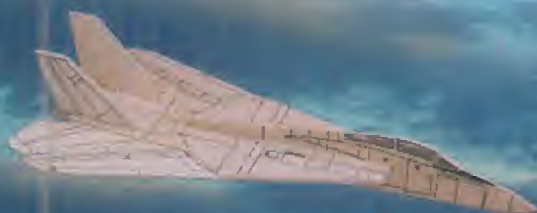
**SR-71 BLACKBIRD**



**F-111 AARDVARK**



**F-18 HORNET**



**F-14 TOMCAT**



**F-15 EAGLE**



**F-16 FALCON**



**C-130 HERCULES**



**SPACE SHUTTLE**

**WESTWINGS**  
by *Estes*

### **SR-71 BLACKBIRD** EST 5012

Monitor the skies with this sleek spy plane! Printed in black. Hand launched.  
Wingspan: 7' 0" (17.8 cm); Length: 13' 0" (33 cm)

### **F-15 EAGLE** EST 5009

Catapult launch your own model of a USAF fighter! Bomber Veteran of Desert Storm! Printed in blue.  
Wingspan: 9' 9" (25.1 cm); Length: 15' 0" (38.1 cm)

### **F-111 AARDVARK** EST 5008

Zoom into the sky with the Air Force's supersonic swing wing fighter bomber! Catapult launched. Printed in black.  
Wingspan: 11' 75" (29.8 cm); Length: 15' 25" (38.7 cm)

### **F-16 FALCON** EST 5001

Command the skies with your own USAF front line tactical fighter! Printed in black. Hand launched.  
Wingspan: 7' 75" (19.7 cm); Length: 11' 25" (28.6 cm)

### **F-18 HORNET** EST 5007

Fly off the deck with this premier US Navy fighter! Printed in black. Hand launched.  
Wingspan: 8' 75" (22.2 cm); Length: 11' 50" (29.2 cm)

### **C-130 HERCULES** EST 5000

Fly your own version of the USAF's heavy lifter! Over 15 ft wingspan. Printed in black. Hand launched.  
Wingspan: 15' 25" (38.7 cm); Length: 17' 25" (40.6 cm)

### **F-14 TOMCAT** EST 5005

Be your own Top Gun with this US Navy fighter! Printed in black. Hand launched.  
Wingspan: 7' 25" (18.4 cm); Length: 11' 50" (29.2 cm)

### **SPACE SHUTTLE** EST 5004

Command your own Shuttle on its glide path back to Earth! Printed in black. Hand launched.  
Wingspan: 7' 0" (17.8 cm); Length: 11' 75" (29.8 cm)

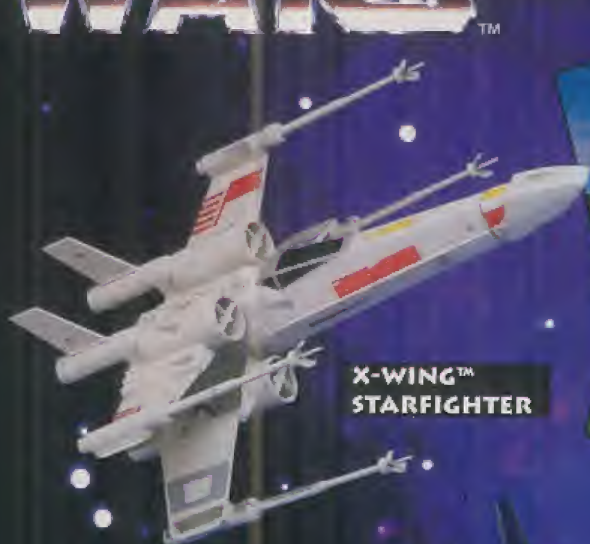
Manufactured and sold by Estes Industries, Inc. Ages 10 and up for catapult launched kits.  
Requires a 1/2" x 1/2" x 1/2" string and one piece of white or yellow glue - not included



# STAR WARS



**BURST INTO THIS GALAXY  
WITH STAR WARS ACTION  
MODELS! FEEL HOW REAL!**



## X-WING™ STARFIGHTER



**Y-WING™  
STARFIGHTER**



**RED SQUADRON  
X-WING™ STARFIGHTERS**



## StarterSets

## ESTES STARTER SETS

**VADER'S TIE  
FIGHTER™**



R2-D2™

STAT WARS READY-BUILT  
READY TO FLY STARTED SETS

**X-WING™ STARFIGHTER** T37 1619

**VADER'S TIE FIGHTER™** FEB 1999

## ► Y-WING™ STARFIGHTER

**RED SQUADRON** (EST. 1875)

## R2-D2™ (1999)



# STAR WARS™

## Starter Sets

### ESTES



**X-WING™  
STARTER SET**



**DEATH STAR™  
STARTER SET**



**R2-D2™**

**DARTH VADER'S  
TIE FIGHTER™**



## STAR WARS READY-BUILT READY TO FLY ROCKET

Experience launching a Star Wars X-wing starfighter in minutes. This Ready-Built rocket includes a mini engine for your first solo mission. Fly it with your current launch system and protect the Rebel Alliance today!

### BUILT READY TO FLY



**LUKE SKYWALKER'S RED  
SQUADRON X-WING™  
STARFIGHTER**



**DEATH STAR™**



**STAR DESTROYER™**

## ESTES STARTER SETS

### X-WING™ STARFIGHTER EST 1490

Be Luke Skywalker and fly his X-wing! Easy to build with detailed plastic construction! Parachute recovery. Soars to over 400 feet (122 meters)!

**SPECS:** Skill Level: 1, Length: 10.9" (27.7 cm), Dia.: 1.4" (36 mm), Wt.: 3.5 oz (99 g), Wingspan: 4.0" (22.6 cm), Recovery: 12" (30 cm) Parachute, Fins: Plastic molded, Max. Altitude: 500 ft (152 m), Recommended Engines: B6-2 (first flight), C5-3, C6-3 (includes two engines)

### DEATH STAR™ EST 1493

Fly the Death Star and watch it burst apart in the sky. Multiple pieces return on streamers. Reassemble and fly again and again!

**SPECS:** Skill Level: 1, Length: 15.5" (39.4 cm), Dia.: 5.0" (12.7 cm), Wt.: 2.3 oz (65 g), Recovery: Streamers and 12" (30 cm) Parachute, Fins: Die cut balsa, Max. Altitude: 156 ft (48 m), Recommended Engines: B6-2 (first flight), C5-3, C6-3 (includes two engines)

## READY-BUILT READY TO FLY ROCKET

### RED SQUADRON

Luke Skywalker's X-wing™ Starfighter EST 1810

Imagine flying an X-wing starfighter with this Ready-Built flying model rocket. This highly detailed X-wing leaps off the launch pad on mini-engine power. Streak through the Star Wars galaxy with your own version of Luke's Red 5 X-wing!

**SPECS:** Skill Level: Ready To Fly, Length: 6" (15.2 cm), Wingspan: 5" (12.7 mm), Wt.: 1.6 oz (45 g), Recovery: 36" (90 cm) streamer on the pod; the X-wing tumbles! Max. Altitude: 205 ft (62 m), Recommended Engine: A10-37 (includes one engine)

## FLYING MODEL ROCKET KITS

### R2-D2™ EST 2142

Fly the heroic droid of the Star Wars saga. Easy to build with realistic details and graphics.

**SPECS:** Skill Level: 1, Length: 8.0" (20.3 cm), Dia.: 2.60" (6.6 cm), Wt.: 3.0 oz (85 g), Recovery: 12" (30 cm) Parachute, Fins: Plastic molded, Max. Altitude: 250 ft (76 m), Recommended Engines: D4-2, B6-2 (first flight), C5-3, C6-3

### DARTH VADER'S TIE FIGHTER™ EST 2144

Fight the Rebels with Vader's personal attack craft. Molded in highly detailed plastic. Special atmospheric flight probe attaches quickly for flight! Soars to over 500 ft (152 m).

**SPECS:** Skill Level: 1, Length: 26.5" (67.3 cm), Dia.: 5.75" (14.6 cm), Wt.: 3.5 oz (107 g), Recovery: 18" (46 cm) Parachute, Fins: Plastic molded, Max. Altitude: 250 ft (76 m), Recommended Engines: B4-2, B6-2 (first flight), C5-3, C6-3, C8-3

### DEATH STAR™ EST 2143

Fly the Death Star and watch it burst apart in the sky. Multiple pieces return on streamers. Reassemble and fly again and again!

**SPECS:** Skill Level: 1, Length: 15.5" (39.4 cm), Dia.: 5.0" (12.7 cm), Wt.: 2.3 oz (65 g), Recovery: Streamers and 12" (30 cm) Parachute, Fins: Die cut balsa, Max. Altitude: 156 ft (48 m), Recommended Engines: B6-2 (first flight), C5-3, C6-3

### STAR DESTROYER™ EST 2147

A fantastic "D"-powered, easy to build, semi-scale model of the work horse of the Empire's fleet. This classic model is sure to be a hit with Star Wars enthusiasts everywhere.

**SPECS:** Skill Level: 2, Length: 37.1" (94.2 cm), Dia.: Probe: 1" (2.5 cm), Span: 8" (20.3 cm), Wt.: 8.8 oz (250 g), Recovery: Two 16" (40 cm) parachutes, Fins: Plastic molded, Max. Altitude: 165 ft (50 m), Recommended Engine: D12-3 only

SHOWN WITH FLIGHT PROBE



Ages 10 and up. Adult supervision for those under 12.



# STAR WARS™

**ESTES STAR WARS  
COMMEMORATIVE SERIES**  
Join the epic space adventure  
with these exciting flying models!



**X-WING™ FIGHTER**



**R2-D2™**



**TIE FIGHTER™**



**X-WING™ FIGHTER**



**Y-WING™ FIGHTER**



**A-WING™ FIGHTER**

Ages 10 and up. Adult supervision for those under 12. Assembly, construction supplies, launch equipment and flying supplies required.

All gliders require assembly and construction supplies. Hand-launched gliders for ages 8 and up. Catapult gliders for ages 10 and up.

**ESTES STAR WARS  
AIR POWERED ROCKET**  
Safe fun for kids of all ages!



**X-WING™ FIGHTER**

**WEST WINGS**

BY *Estes*

**WEST WINGS STAR WARS  
FLYING ACTION MODELS**

- Portable flying fun from the Star Wars movies
- Precision die-cut balsa with angled cutouts and notches
- Easy to build and fly
- One catapult launched model (with a plastic-glided launcher and balsa wing) coming soon!



**STAR DESTROYER™**

**CLASSIC COMMEMORATIVE SERIES OF  
STAR WARS FLYING MODEL ROCKETS**

**X-WING™ FIGHTER** EST 2100

Join the Fight with this classic representation of the X-wing. Features: Plastic model, handcrafted and painted with a matte, off-white finish.

Specs: Skill Level: 2, Length: 17" (43.3 cm), Wingspan: 10" (25.4 cm), Wt.: 1.5 oz (42.7 g), Recovery: 12" (30.5 cm), Max. Altitude: 200 ft (61 m), Recommended Engine: C2-3 (0.01)

**R2-D2™** EST 2104

Join the fun with this classic of the classic. This R2-D2 is made of plastic and is a great addition to your collection.

Specs: Skill Level: 2, Length: 8" (20.3 cm), Wt.: 2.1 oz (59.5 g), Wt.: 3" (7.6 cm), Recovery: 12" (30.5 cm), Max. Altitude: 200 ft (61 m), Recommended Engine: C2-3 (0.01)

**TIE FIGHTER™** EST 2106

Join the Fight with this classic of the classic. This Tie Fighter is made of plastic and is a great addition to your collection.

Specs: Skill Level: 2, Length: 8" (20.3 cm), Wingspan: 10" (25.4 cm), Wt.: 2.1 oz (59.5 g), Recovery: 12" (30.5 cm), Max. Altitude: 200 ft (61 m), Recommended Engine: C2-3 (0.01)

**AIR POWERED ROCKET**

**X-WING™ FIGHTER** EST 2500

Fly your own X-wing using only the power of the air. Our X-wing is a lightweight model of soft plastic foam. Parts are interlocking and easy to assemble. Provides hours of fun for young Rebel pilots.

Specs: Skill Level: Aircraft Ready To Fly, Length: 11.5" (29.2 cm), Wingspan: 8.5" (21.6 cm), Wt.: 0.9 oz (25 g), Recovery: Turnlike

**WEST WINGS BALSA GLIDERS**

**X-WING™ FIGHTER** EST 5022

Fly this key Rebel fighter craft. Hand-launched gliding model—printed in Rebel blue ink.

Specs: Wingspan: 10.5" (26.7 cm), Length: 11.5" (29.2 cm)

**Y-WING™ FIGHTER** EST 5023

Add to your Rebel fleet with this fighter. Hand-launched gliding model—printed in Rebel blue ink.

Specs: Wingspan: 7" (17.8 cm), Length: 13.5" (34.3 cm)

**STAR DESTROYER™** EST 5020

Command your own Star Destroyer against the Rebel fleet. Catapult-launched gliding model—printed in Imperial black ink.

Specs: Wingspan: 9.5" (24.1 cm), Length: 12" (30.5 cm)

**A-WING™ FIGHTER** EST 5021

Fly one of the Rebel's fastest fighters. Catapult-launched gliding model—printed in Rebel blue ink.

Specs: Wingspan: 6.5" (16.5 cm), Length: 10" (25.4 cm)



# STAR WARS™

## COX® AIRCRAFT

Fly through the *Star Wars* universe with these exciting Cox *Star Wars* models. Each is powered by a Cox Sure Start™ .049 engine and molded out of tough polystyrene to absorb the bumps and bruises of battle. Each kit assembles quickly—no glue required.

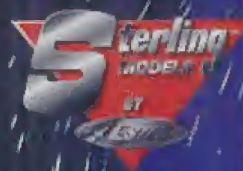


### X-WING™ FIGHTER

Recommended for ages 10 and up.  
Actual product may vary slightly in appearance.



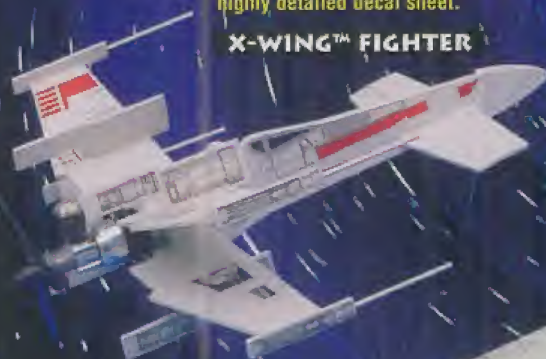
### SNOWSPEEDER™



## STERLING™ MODELS CONTROL LINE FLIERS

Build and fly your own profile *Star Wars* control line fighters. All balsa parts are precision die cut. Engine mount, wheels and control system are molded in tough nylon and included in each kit. Requires a Cox Babe Bee .049 engine and 405 or 885 starting kit (not included). Each kit includes full plans, instructions and highly detailed decal sheet.

### X-WING™ FIGHTER



### Y-WING™ FIGHTER

Recommended for those 10 years of age and up. Adult supervision recommended for those under 12 years of age.

## LANDSPEEDER™



North Coast Rocketry

## NORTH COAST ROCKETRY®

High Impulse® model rocket fun for the adult rocket modeler



Kit requires assembly. Modeling tools, glue and paint not included. Recommended for ages 18 and up.

## COX® AIRCRAFT

**X-WING™ FIGHTER** CONTROL LINE... 04951  
Fly through the universe with this exciting Cox *Star Wars* model.  
Specs: Wingspan: 11" (27.9 cm) Length: 11.5" (29.3 cm)

**SNOWSPEEDER™** CONTROL LINE... 04952  
Race across the lands of Hoth with your polystyrene snowspeeder.  
Specs: Wingspan: 11" (27.9 cm) Length: 11" (27.9 cm)

**LANDSPEEDER™** RADIO CONTROL... 04953  
Race across the dunes of Tatooine with your radio controlled Landspeeder. Powered by the Cox Sure Start engine. Simulated head with retractable glass shield.  
Specs: Wingspan: 9" (22.9 cm) Length: 12" (30.5 cm)  
All kits require the Cox 405 or 885 Starting Kit—see page 74.

## STERLING™ MODELS

**X-WING™ FIGHTER** CONTROL LINE... 04954  
Experience the force as you build and fly this exciting X-wing fighter.  
Specs: Wingspan: 11" (27.9 cm) Length: 11" (27.9 cm)

**Y-WING™ FIGHTER** CONTROL LINE... 04955  
Fly this unique, three model of the Rebel Alliance's Y-wing.  
Specs: Wingspan: 10" (25.4 cm) Length: 11.5" (29.3 cm)

## NORTH COAST ROCKETRY™

**X-WING™ FIGHTER** HIGH IMPULSE® ROCKET... 1021-0001  
Huge! For advanced rocketeers, this High Impulse rocket features vacuum-formed body tubes, detailed plastic parts and a rear-ejected 36" (91.4 cm) parachute.  
SPECS: Length: 21" (53.3 cm) Dia.: 3.25" (82.5 mm) Weight: 18" (45.7 cm) Wt.: 20.2 oz (565 g) Recovery: 36" (91.4 cm) Nylon Parachute, Max. Altitude: 800 ft (244 m) Recovery: 10" Motors: F62-4 670-5

## HIGH IMPULSE®

F & G POWER FOR FANTASTIC FLIGHTS!



## THE ULTIMATE X-WING™ FIGHTER

Kit requires assembly. Modeling tools, glue and paint not included. Recommended for ages 18 and up.



## MORE FUN, MORE GALAXIES TO EXPLORE!

Explore new worlds with exciting hobby products from Centuri™. Sterling™ Models and North Coast Rocketry® models provide the hobby enthusiast with challenging kits to build, fly, sail and launch. Visit your favorite hobby center to see the complete Centuri™ product line.



North Coast Rocketry®  
BY ESTES

### STERLING™ MODELS

Discover the adventure of model aviation and boating with Sterling™ Models by Estes®. The Sterling™ Modeling world of balsa, wood and precision plastic models includes rubber band powered free flight aircraft of WWI, WWII, aerobatic and civilian favorites, control line flying models of famous trainers, stunters and scale aircraft designed for .049 to .36 model engines plus model sail boats, racing boats and battleships for action on the "high seas".



### NORTH COAST ROCKETRY®

Unleash the power of F and G engines! These colossal-sized models thunder off the pad! North Coast Rocketry® rockets are bigger, stronger and more powerful, yet contain all the safety, quality and features you find in Estes model rockets. Get started in High Impulse® rocketry with North Coast Rocketry® products.



Recommended for  
ages 18 and up.



### INDEX

Aerobal™ (Cox)	52	Fin Stock (Estes)	47	Ready to Fly Starter Sets (Estes)	6-
AIM-9 Sidewinder™ (Estes)	33	Firebird™ (Cox)	52	Recon™ (Estes)	4
AIM-120 AMRAAM™ (Estes)	25	Firebird™ (Estes)	28	Recovery Wadding (Estes)	4
Air Rescue™ (Cox)	56	Firestorm™ (Light Gliders)	64	Red Squadron X-wing™ (Estes RTF)	5
Amwalker™ Starter Set (Estes)	13	Fire Struck™ (Estes)	29	Red Squadron X-wing™ Starfighter (Estes RTF)	7
Allen Hovercraft™ (Cox)	57	Flash™ (Estes)	17	Red Storm™ (Estes)	1
Alpha® (Estes)	27	Flex Wing Flyer (Cox)	58	Rocket Builder's Marking Guide (Estes)	4
Alpha II® Starter Set (Estes)	11	Flight Sequence (Estes)	4	Sabot™ Starter Set (Estes)	1
Alpha III® (Estes)	18	Flight Master® (Light Gliders)	65	Safety Cap and Key (Estes)	1
Alttrak™ (Estes)	45	Fly Boy™ (Cox)	58	Safety Code (Estes)	1
Apache Helicopter (Cox)	55	Formula One™ (Cox)	52	ShellShocked™ (Estes)	4
A.R.V. Condor™ (Estes)	38	Free Fall™ (Estes)	6	Shock Cords and Mounts (Estes)	4
Asteroid Hunter™ (Estes)	14	Free Flight Helicopters (Cox)	56-57	Silver Comet™ (Estes)	3
Astrocad™ (Estes)	49	Fun Flyers™ (Cox)	50	Sizzler® (Estes)	2
AstroCam® 110 (Estes)	30	Fun Flyer™ Hel (Cox)	50	Sky Jumper® (Cox)	3
AstroCam® RTF (Estes)	8	Gemini DC™ (Estes)	34	Skywinder™ (Estes)	2
Astrosat LSX™ (Estes)	16	General Rocket Information	2-5	Slipstream™ (Cox)	5
AT-6 Texan™ (Cox)	55	Generic E2X® Bulk Pack (Estes)	48	SLA-3 Seahawk™ (Estes)	3
AT-6 Texan™ Bomb Drop (Cox)	54	Gnome™ (Estes)	18	Snowspeeder™ (Cox)	7
Athens™ (Estes)	18	Goliath™ (Estes)	10	Software (Estes)	4
Attack Cobra (Cox)	58	HelCat™ Starter Set (Estes)	12	Space Shuttle™ (Estes)	4
A-wing™ fighter (West Wings)	72	Hijax™ (Estes)	21	Space Shuttle™ (West Wings)	5
Babe Bee .049 Engine (Cox)	63	H-Lite® (Light Gliders)	65	Space Shuttle™ Starter Set (Estes)	11
Backdraft™ (Cox)	54	Hyper-X™ (Estes)	14	Spillfire™ (Estes)	3
Ball-Out™ (Estes)	20	Igniters (Estes)	44	SR-71 Blackbird™ (Estes)	2
Bandit™ (Estes)	16	Igniter Plugs (Estes)	42	SR-71 Blackbird™ (West Wings)	2
Baron™ (Estes)	19	Invader™ (Estes)	15	SR-X™ (Estes)	3
Basic Starting Kit (Cox)	63	Ionizer™ (Estes)	6	Star Destroyer™ (Estes)	7
Bela™ Series Rockets (Estes)	23-33	Killer Bee .049 Engine (Cox)	63	Star Destroyer™ (West Wings)	7
Big Bertha™ (Estes)	26	Landspoder™ (Cox)	75	Starburst™ (Estes)	1
Big Dawg™ (Estes)	24	Launch Lugs (Estes)	47	Star Wars Products	64-71
Black Brant II™ (Estes)	37	Launch Rods (Estes)	45	Starter Sets (Estes)	10-11
Black Widow .049 Engine (Cox)	63	Lazy Bee™ (Cox)	60	Sterling™ Models	71
Blast Deflector Plate (Estes)	45	Light Gliders™	64-65	Streamers (Estes)	4
Blast-Off® Flight Pack (Estes)	44	Loadstar™ Bulk Pack (Estes)	48	Super Nova Payloader™ (Estes)	37
Body Tubes (Estes)	46	LongShot™ (Estes)	37	Super Shot™ Starter Set (Estes)	11
Bulk Packs (Estes)	48	Mach-12™ (Estes)	29	Sure Start™ Models (Cox)	54-55
Bull Pup 12D™ (Estes)	36	Mailac™ (Estes)	36	Sweet Vee™ (Estes)	41
C-130 Hercules (West Wings)	66	Mania™ (Estes)	22	Table of Contents	4
Centering Rings (Estes)	47	Master™ Series Rockets (Estes)	40	Teacher's Starter Set (Estes)	41
Cessna (Cox)	50	Mean Machine™ (Estes)	35	Tee Dees® .010 Engine (Cox)	63
Cessna Classic (Cox)	50	Mega Max™ (Estes)	10	Tee Dees® .049 Engine (Cox)	63
Cessna Skymaster (Cox)	52	Mercury Atlas™ (Estes)	40	Tee Dees® .09 Engine (Cox)	63
Code Red™ (Estes)	39-39	Mirage™ (Light Gliders)	65	Texaco .049 Engine (Cox)	63
Comanche-3™ (Estes)	6	Missile Command™ (Estes)	9	Tidal Wave™ (Estes)	1
Comanche-3™ (Estes)	38	Mk-109 Stingray™ (Estes)	16	TIE Fighter™ (Estes Commemorative)	71
Comanche Helicopter (Cox)	56	Mongoose™ (Estes)	31	Tomcat™ (Estes)	36
Computer Software (Estes)	49	Mosquito™ (Estes)	23	Tornado™ (Estes)	36
Control Line - Electric (Cox)	51	Nike Arrow™ (Estes)	18	Transroc II™ (Estes)	42
Control Line Scale Models (Cox)	54-55	Ninja® (Estes)	23	Trans Wing™ (Estes)	36
Corkscrew™ (Estes)	29	North Coast Rocketry®	76	Tube Couplers (Estes)	42
Cox Products	50-63	Nose Cones (Estes)	46	Turbo Copier™ (Estes)	25
Curricula (Estes)	49	Nova Payloader™ (Estes)	27	Turbo Hawk™ (Cox)	58
Cyclone™ (Light Gliders)	65	Ombid™ (Estes)	20	Twister™ (Estes)	12
Darth Vader's TIE Fighter™ (Estes)	70	Parachutes (Estes)	47	Vader's TIE Fighter™ (Estes RTF)	66
Death Star™ (Estes)	71	Payload Sections (Estes)	40	Venom™ (Estes)	31
Death Star™ Starter Set (Estes)	70	Pea Wee .020 (Cox)	63	Venus Probe™ (Estes)	32
Decals (Estes)	47	Performance Bulk Pack (Estes)	48	Vidlar™ (Cox)	40
Deluxe Starting Kit (Cox)	63	Phantom™ (Light Gliders)	64	Viking™ (Estes)	30
Designer's Special™ (Estes)	45	Phoenix™ (Estes)	36	Warrior™ (Cox)	60
Dowels (Estes)	47	Piper™ (Cox)	50	Warranty (Estes)	4
E2X® Series Rockets (Estes)	16-22	Piper J-3 Cub (Cox)	55	West Wings™	65-67
Educational Products	48-49	Piper Comanche (Cox)	53	Whirlwind™ (Light Gliders)	84
Electric Powered Glider (Cox)	59	Piper Crusier (Cox)	50	Wildfire™ (Estes)	25
Electron Beam® Launch Controller (Estes)	45	Porta-Pad® II Launch Pad (Estes)	45	Wizard™ (Estes)	26
Emergency Repair Kit (Estes)	45	Prowler™ (Estes)	24	X-Flyers™ (Estes)	15
Engines (Cox)	63	Python™ (Estes)	34	X-Ray™ (Estes)	21
Engines (Estes)	42-44	Quark™ (Estes)	23	X-wing™ Fighter (Cox)	74
Engine Bulk Packs (Estes)	46	Quicksilver™ (Estes)	7	X-wing™ Fighter (Estes Commemorative)	72
Engine Hooks (Estes)	47	R/C Electric Models (Cox)	59	X-wing™ Fighter Starter Set (Estes)	70
Engine Mounts (Estes)	47	R/C Gas Models (Cox)	60-61	X-wing™ Fighter (North Coast Rocketry)	75
Explorer™ Series Rockets (Estes)	34-37	R/C E-Z Bee II™ (Cox)	60	X-wing™ Fighter (Sterling)	74
Extra 300S (Cox)	54	R/C E-Z Bee Sport™ (Cox)	60	X-wing™ Fighter (West Wings)	72
E-Z Flyers® (Cox)	52-53	R/C Gliders (Estes)	41	X-wing™ Fighter air powered rocket (Estes)	73
Fat Boy™ (Estes)	28	R/C Recon™ (Cox)	62	X-wing™ Fighter (Estes RTF)	60
F&P Beatal™ (Cox)	51	R/C Sky Bird™ Electric (Cox)	58	Yarkee™ (Estes)	26
F-14 Tomcat (West Wings)	66	R/C Sky Bird™ Gas (Cox)	61	Yellow Jacket™ (Estes)	26
F-15 Eagle (West Wings)	66	R2-D2™ (Estes)	70	Y-wing™ Fighter (Sterling)	74
F-16 Falcon (West Wings)	66	R2-D2™ (Estes Commemorative)	72	Y-wing™ Fighter (West Wings)	72
F-22 Air Superiority Fighter™ (Estes)	32	Rampage™ (Estes)	19	Y-wing™ Starfighter (Estes RTF)	68
F-111 Aardvark (West Wings)	60	Rattler 7™ (Estes)	16	Zenex SSRV™ (Estes)	24
Fin Alignment Guide (Estes)	45	Ready to Fly (Estes)	14-15	Zinger™ (Estes)	32

For more product information, call or write for your free Sterling™ Models and North Coast Rocketry® catalogs.



# Stop Pretending-

Live a REAL flying adventure by launching an Estes model rocket thousands of feet into the air or by screaming through the skies with your Cox .049 engine powered airplane! You'll experience flight like never before with Estes and Cox flying models. Seek out your own adventure in the pages of this catalog and join in the excitement of building, launching and flying Estes and Cox models.

# Get real!

Start Flying Today with Estes and  
Cox Flying Models!

You'll find all the Estes and Cox flying models in this catalog and at your favorite hobby, toy, craft or discount store today!

## It's outta here!

